Sun GlassFish Web Space Server 10.0 Administration Guide

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Preface

Sun GlassFish Web Space Server launched as part of Sun's GlassFish Portfolio is a next-generation Web 2.0 application aggregation and presentation platform.

Who Uses Sun GlassFish Web Space Server?

Sun GlassFish Web Space Server offers features for general users, system administrators, and application and portal developers.

- For **General Users**, Web Space Server makes it easy to communicate, collaborate, and customize the applications shared by your organization. Social networking components, like blogs, wikis, bookmarks, and messaging can be presented side-by-side with proprietary and third-party business and productivity applications. Different user communities can have their own portals, layouts, and customizations, and Web Space Server can be scaled down or up to suit organizations from the very small up to the enterprise level.
- For **System Administrators**, Web Space Server makes it easy to manage users, groups, communities, permissions, and highly specific levels of security. A browser-based GUI makes managing portals, portlets, plugins, and applications as simple as dragging and dropping. Web Space Server runs on top of the enterprise-class, open source GlassFish Application Server, which means that Web Space Server can be optimized according to your needs for performance, reliability, security, load balancing, and clustering, among other server characteristics.
- For **Application and Portal Developers**, Web Space Server makes it easy to develop portlets, portals, plugins, services, content management, workflows, and themes using your own tools, including NetBeans™, Eclipse, and Dreamweaver. Web Space Server is based on the open source OpenPortal and Liferay 5.2 code bases, which means what you develop in Web Space Server will be standards-based, portable, and maintainable. You can combine familiar Ajax, Jmaki, Ruby, PHP, and Java technologies and techniques with Web Space Server's powerful presentation capabilities to deliver the kind of rich, dynamic, interactive user experience previously available only in complex custom-built Web applications.

Before You Read This Book

Readers should be familiar with the following products and concepts:

- Sun Java System Directory Server
- Sun Java System Access Manager
- Your web container
  - Sun GlassFish Enterprise Server v2/v3
- Your operating system
- Basic UNIX administrative procedures
- LDAP (lightweight directory access protocol)
- Web Services for Remote Portlets (WSRP)

How This Book Is Organized

This book contains the following chapters:

1. Chapter 1, "Administration Overview," discusses some general administration topics which are helpful for an administrator to begin with.
2. Chapter 2, "Web Space Server Installation Instructions," contains the installation instructions for Web Space Server and the database and the application server that you want to configure with it.
3. Chapter 3, "Customizing Sun GlassFish Web Space Server," discusses the topics on changing the look and feel of the product as desired by the customer.
4. Chapter 4, "Use Cases for Sun GlassFish Web Space Server," discusses some of the use cases for working with some of the commonly available portlets shipped as part of the core and the samples for Sun GlassFish Web Space Server.
5. Chapter 5, "Roles and Permissions," has the details of how you can define roles and permissions on various portal resources such as, users, communities, and organizations.
6. Chapter 6, "Content Management System," discusses the administration tasks related with content management.
7. Chapter 6, "Content Management System," discusses the administration tasks related with content management.
8. Chapter 8, "Advanced Web Space Server Configuration," discusses the topics on advanced customization to match the unique needs of a customer.
9. Chapter 9, "Configuring Portal Properties," discusses how you can override properties in the `portal.properties` file.
10. Chapter 10, "System Maintenance," discusses the different aspects of monitoring and backup.

11. Chapter 11, "Performance Tuning," discusses the topics related with improving the performance of the system.
12. Chapter 12, "Troubleshooting," discusses the troubleshooting information for some of the issue that you may face when you are working with Sun GlassFish Web Space Server.

Related Sun GlassFish Web Space Server Documentation

The Sun GlassFish Web Space Server documentation set is available on the *Sun GlassFish Web Space Server Core and Samples Documentation Collection* and the *Sun GlassFish Web Space Server Add-Ons Documentation Collection*.

Additional documentation is also available on the *Liferay wiki*, Liferay Community Documentation, and *OpenPortal Documentation* sites.

Related blog, forum, and website links:

- `http://blogs.sun.com/main/tags/webspace`

  This blog link lists all the blog postings with the tag "webspace".
- `http://blogs.sun.com/portal/`

  This is a blog link named *Portal Post* and is exclusively meant for posting on portal products from Sun™ Microsystems.
- `http://forums.sun.com/category.jspa?categoryID=111`

  This is the common discussion forum for all portal products from Sun Microsystems.
- `https://webspace.dev.java.net/`

  This is the community website for Sun GlassFish Web Space Server.
- `https://ruon.dev.java.net/`

  This is the developer community site for ruon-web.
- `https://saw.dev.java.net/`

  This is the developer community site for saw-web.

Related Third-Party Web Site References

Third-party URLs are referenced in this document and provide additional, related information.

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Documentation, Support, and Training

The Sun web site provides information about the following additional resources:

- Documentation (`http://www.sun.com/documentation/`)
- Support (`http://www.sun.com/support/`)
- Training (`http://www.sun.com/training/`)

Sun Welcomes Your Comments

Sun is interested in improving its documentation and welcomes your comments and suggestions. To share your comments, go to `http://docs.sun.com` and click Feedback.

Typographic Conventions

The following table describes the typographic conventions that are used in this book.

TABLE P–1 Typographic Conventions

Typeface	Meaning	Example
`AaBbCc123`	The names of commands, files, and directories, and onscreen computer output	Edit your `.login` file. Use `ls -a` to list all files. `machine_name% you have mail.`
`AaBbCc123`	What you type, contrasted with onscreen computer output	`machine_name%` **`su`** `Password:`
aabbcc123	Placeholder: replace with a real name or value	The command to remove a file is `rm` *filename.*

TABLE P–1 Typographic Conventions *(Continued)*

Typeface	Meaning	Example
AaBbCc123	Book titles, new terms, and terms to be emphasized	Read Chapter 6 in the *User's Guide*. A *cache* is a copy that is stored locally. Do *not* save the file. **Note:** Some emphasized items appear bold online.

Shell Prompts in Command Examples

The following table shows the default UNIX® system prompt and superuser prompt for the C shell, Bourne shell, and Korn shell.

TABLE P–2 Shell Prompts

Shell	Prompt
C shell	`machine_name%`
C shell for superuser	`machine_name#`
Bourne shell and Korn shell	`$`
Bourne shell and Korn shell for superuser	`#`

◆ ◆ ◆ CHAPTER 1

Administration Overview

This chapter provides a basic understanding of Sun GlassFish Web Space Server(Web Space Server).

- "About Sun GlassFish Web Space Server" on page 21
- "Sun GlassFish Web Space Server Features" on page 22
- "Web Space Server Terminology" on page 23
- "Using the Evaluation Bundle" on page 24
- "Creating an User Account on Web Space Server" on page 25
- "Defining Password Policies for Users" on page 26
- "Welcome Menu for the Admin User" on page 26
- "Setting up a Development Environment for Web Space Server" on page 30

About Sun GlassFish Web Space Server

Sun GlassFish Web Space Server launched as part of Sun's GlassFish Portfolio is a next-generation Web 2.0 application aggregation and presentation platform. It is a suite of integrated software products that enables businesses large and small to pull together applications and content from a variety of Web-based and internal sources and present them as a unified, customizable portal on Web browsers, kiosks, and mobile devices. Web Space Server makes it easier for users to find and use the tools and information they need.

Sun GlassFish Web Space Server is a collaborative effort between Sun Microsystem's Portal Server team, the Liferay Community, and the OpenPortal community. Web Space Server integrates technologies from these three products to enable enterprise-class portals that are easy to use for end users, system administrators, and developers alike.

Sun GlassFish Web Space Server enables:

- **Social Networking for the Enterprise**

  Find people with the answers across organizations, silos, and hierarchies, and boost productivity in distributed teams.
- **Enterprise Widgets for Collaboration Work**

  Bundled Productivity Widget Suites to get work done (CMS, Workflow), and Information Widget Suite for Effective Collaboration (blogs, wikis).
- **Internet Widgets on the Enterprise Extranet**

  Build stickiness into your intranet with Google Gadgets, YouTube, and Facebook widgets.

Sun GlassFish Web Space Server Features

Sun GlassFish Web Space Server provides a new class of portal functionality by which users can define their own Web spaces. With built-in content and document management, human workflow development tools, enterprise identity integration, and social networking features, system administrators and application developers can now deploy a platform that allows for rapid rollout of next generation Web capabilities for their users.

Key Web Space Server features include:

- Identity-based content delivery
- User-managed Web spaces, including user self-Web publishing and user access controls
- Rapid and simple Web site design tools make it possible to quickly set up Web sites for content, collaboration, and interactivity, with out of the box templates
- Built-in collaboration, with bundled wiki, blog, task management, calendaring, document sharing, polls, IM, and email applications
- Document and Web content management system with workflow, staging, and publication tools
- Syndicate portlets and widgets with REST
- Develop widgets using the JSR 286 portlet standard as well as scripting standards such as Ruby, PHP, and JMaki
- Add-Ons features available for paid Sun GlassFish Web Space Server users. See, Sun GlassFish Web Space Server 10.0 Add-On Collection.

Web Space Server Terminology

The following are some common terms relevant to Web Space Server.

Community	A collection of users sharing common interests or goals. Community members typically share a common set of portlets and pages. For example, a community might have a wiki that is not available to users outside the community. Multiple user groups can coexist within a given community.
Friendly URL	The modifiable part of the URL for the private page of an user account.
Guest	A user who does not have an account on a given Web Space Server site. Typically, guest users have limited ability to view or modify content on a Web Space Server site.
Instanceable Portlet	If you can add many instances of a portlet to your page, the portlet is called an instanceable portlet.
Layout Template	A scheme that defines the general layout of portlets and widgets on a portal page. As with themes, layout templates can be applied by site administrators and registered users.
Non-instanceable Portlet	If you can add just one instance of a portlet to your page, the portlet is called a it is a non-instanceable portlet.
Organization	A hierarchical collection of users, user groups, and communities. Multiple communities can coexist within a given organization.
Portlet	Portlets are pluggable user interface software components that are managed and displayed in a web portal. Typically, a portal page is displays as a collection of non-overlapping portlet windows, where each portlet window displays a portlet. Web Space Server portlets confirm to JSR286 standards.
Public Page and Private Page	Every individual user account in a Web Space Server site contains public pages and private pages. Pages that can be accessed by a guest user are public pages. Pages that can only be accessed by logging in to a user account are private pages.
Theme	The "look and feel" settings that are applied to a portal page. Themes can be applied sitewide by a Web Space Server site administrator or on a page-by-page basis by registered users.
User	A person who is registered on a Web Space Server site.
User Group	A grouping of users. Members of a user group typically share common sets of access permissions.
User Role	Permissions and access rights defined for a given user; typically maps to rights within groups, communities, and organizations.
Widget	Widgets are similar to portlets except that unlike portlets, widgets are created using a programming language other than the Java , such as PHP or Ruby.

Using the Evaluation Bundle

Sun GlassFish Web Space Server is part of the GlassFish Portfolio. You can use the Web Space Server evaluation bundle for a quick evaluation of the product.

You can download Sun GlassFish Web Space Server from the following sites:

`https://webspace.dev.java.net/`

`http://www.sun.com/software/products/webspace/get.jsp`

Evaluation bundles use the naming pattern *Webspace version*`-gfv2–`*OS*`.zip`. To install the evaluation bundle, you just need JDK 1.5 or above installed on your machine. When you install the evaluation bundle; GlassFish v2, the HSQL database, and samples are installed along with it.

You can use the evaluation bundle, which has the HSQL database embedded with it, for quick evaluation. It is a good method to have it up and running fast for reviewing or developing, it has several drawbacks:

- Only one user can access the database at a time. The data is stored on a file on disk and HSQL locks it when doing changes.
- The data is stored inside the application server and might be lost on redeployment.
- This configuration does not scale well and will have performance problems when multiple users access the system.

The *Sun GlassFish Web Space Server10.0 Getting Started Guide* provides detailed instructions about how to get the evaluation bundle up and running.

For a production environment, install the core bundle of Web Space Server. It can be installed on an existing instance of GlassFish v2, and can be configured to use MySQL (preferred) or Oracle 10g (or later) databases. You can update the installation with samples and other add-ons.

The core bundle naming pattern is *Webspace version*`-for-gfv2.zip`

The Add-on bundle naming pattern is*Webspace version*`-addon-`*addon-name*`.zip`

The evaluation bundle is not recommended for a production environment. Samples which are bundled with the evaluation bundle are not tested and certified by Sun. Also, the `updatetool` utility is not available for the evaluation bundle.

Creating an User Account on Web Space Server

Any user who can accesses the HTTP instance of Web Space Server can create a user account. You can sign in by selecting *Sign In* from the Welcome menu. If you are an existing user, sign in by using your user name and password. To create a new account click on the *Create Account* link and follow the instructions to create an account. When you add an user account, the user is added to the list of Users in the Enterprise Admin Portlet. The admin user can monitor all the user accounts.

Also, you can log in to Web Space Server by using an OpenID. You can get an OpenID from any of the popular OpenID providers such as claimID, myOpenID, VeriSign's Personal Identity Provider, myID.net, and myVidoop. For more information, see `http://openid.net/`.

When you create an OpenID with a OpenID provider such as myOpenID, a message is sent to the email address that you provide. Your OpenID will be authenticated when you respond to the message. You can use the OpenID to log in to any of the web sites that support OpenIDs.

▼ To Log in to Web Space Server Using an OpenID

1. **Access the HTTP instance for Web Space Server using `http://`*<machine-name>*`:8080`.**
2. **Choose Sign In from the Welcome menu.**
3. **Click on the OpenID link.**
4. **Type the OpenID URL and click Sign In.**
5. **Select the Skip This Step Next Time I Sign In to `http://`*machine-name*`:8080` option, and click Continue.**

   This accesses to the OpenID site.
6. **Authenticate your OpenID and click Save.**

Note – For the OpenIDs provided by Yahoo and many other OpenID providers, you need to register the OpenID by selecting **My Account → Identification → OpenID**.

Defining Password Policies for Users

The admin user can define password policies for Users and Organizations. You can change the default password policy or create a new password policy. You can apply different password policies to different sets of users and organizations.

▼ To Define a Password Policy

1. **Log in to Web Space Server as the admin user.**
2. **Choose Control Panel → Portal → Password Policies from the Welcome menu.**
3. **Click the Add button to add a new password policy.**
4. **Type the name and description for the password policy.**

   You can enable the desired options for the password policy. To display information about an option, place the cursor on the help button next to the option. You can enable:

   - Changeable option to enable users to change the password
   - Password Syntax Checking
   - Password History
   - Password Expiration
   - Lockout
5. **Click Save.**
6. **To assign users or organizations to the password policy, click the Actions button corresponding to the password policy and select Assign Members from the menu.**

Welcome Menu for the Admin User

Welcome menu for the admin user provides a convenient user interface for various administration tasks. You can access the Welcome menu from any public or private page.

▼ To use the Welcome Menu

1 **Log in to Web Space Server as the Admin User.**

2 **Navigate to the Welcome menu, and click on the menu item that you need to access.**

Home, **Control Panel**, **My Account**, **Sign Out**, **Add Application**, **Layout Template**, **Manage Pages**, **Toggle Edit Controls**, and **My Places** are the items which can be accessed from the Welcome menu for the admin user.

To apply control settings:
"Control Panel" on page 27

To apply account settings:
"My Account" on page 28

To add portlets and widgets to your page:
"Add Application" on page 29

To change the layout template:
"Layout Template" on page 29

To specify a friendly URL to your public and private pages:
"Manage Pages" on page 29

To toggle edit controls of the portlets on your page:
"Toggle Edit Controls" on page 29

To navigate to public and private pages associated with your account:
"My Places" on page 29

Control Panel

You can use the Control Panel to configure the **User**, **Content**, **Portal**, and **Server** settings. Select **Control Panel** from the Welcome menu. You can use the tools available on the left menu to perform various administrative tasks.

The tools available to the admin user provide the privileges to perform content management, portal resource administration, server administration, portal administration, WSRP administration, and general administration tasks.

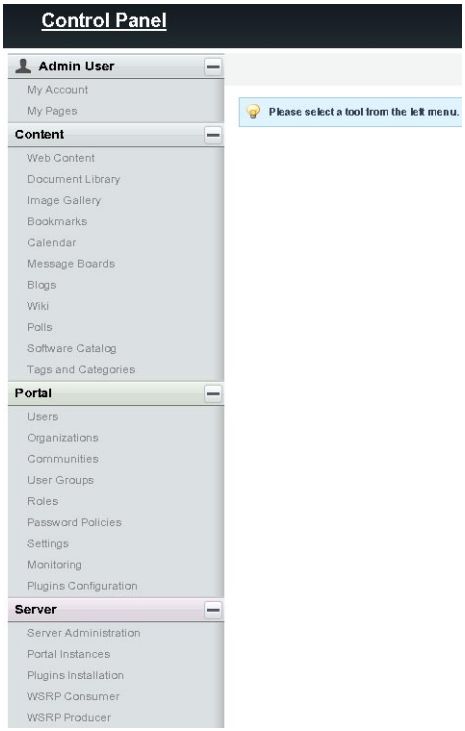

FIGURE 1–1 Tools available on the Control Panel

You can select a tool from the left menu to apply settings to it. For example, click 'Server Administration' under 'Server'.

You can perform a number of server maintenance activities from this page.

Similarly, you can apply different kind of settings by using the Control Panel. Click the "Back to *Community*" link in the top right corner of the page to return to the main page.

My Account

To access the **My Account** page, click the My Account tool from the left menu in the Control Panel or select "My Account" from the Welcome menu.

From this page, you can view the user information, can apply identification settings, and can apply some miscellaneous settings such as, language and display settings.

Add Application

You can add a portlet or a widget to your page by choosing **Add Application** from the Welcome menu.

Layout Template

Choose **Layout Template** from the Welcome Menu. The *Layout* window appears. The **2 Column (30/70)** is the default layout. You can select the radio button for the Layout of your choice and click **Save** to apply the layout for your account.

Manage Pages

You can use Manage Pages from the Welcome Menu to specify a Friendly URL and apply other settings to a Public Page or a Private Page associated with your account.

For more details on Friendly URLs, refer Friendly URLs.

Toggle Edit Controls

You can use the Welcome menu to toggle edit controls for portlets. Portlets generally have edit control options such as close, maximize, minimize, look and feel, and configuration. You can toggle edit controls on or off by using the **Toggle Edit Controls** option.

My Places

You can select **My Places** from the Welcome menu to navigate to all the public and private pages of the communities associated with your account. When you click My Places, the page you are on is highlighted in the menu appearing.

Note – A *public page*is a page which can be viewed by the Guest user i.e., the public page is accessible without the need to log in. *Private pages* can be viewed only after you log in.

Setting up a Development Environment for Web Space Server

If you are beginning a Web Space Server-based project, you will probably need to get your developers up and running before your production systems are ready. In order for a developer to do his or her work, an instance of Web Space Server needs to be running on his or her machines. Additionally, to prevent file-locking issues, a developer's version of Web Space Server should not use the embedded database, so a separate database will need to be installed.

Web Space Server uses many open source tools for development which means there are no expensive tools to purchase. Also, developers can choose the tools they are most comfortable with to write code on Web Space Server platform.

Some tools are required in order to develop with Web Space Server:

- Apache Ant 1.7.0 or later.
- A Java Development Kit.
- A Web Space Server-supported database. (MySQL is recommended for a developer machine.)
- The IDE or development environment of your choice.

If you are customizing Web Space Server through the extension environment, you might need a subversion client, or you can also download the Web Space Server source from the web site. See the Web Space Server Developer's Guide for further details

Developing With Apache Ant

Apache Ant is a build tool that is used extensively by both the Web Space Server source and the extension environment. You can download the latest version of Ant from `http://ant.apache.org`. After downloading, uncompress the archive into a folder. You then need to set the `ANT_HOME` environment variable to add binaries to your `PATH`.

▼ To Set the `ANT_HOME` Variable on Windows

1. **Choose Start → Control Panel, and double-click the System icon.**
2. **Click the Advanced tab, and then click the Environment Variables button.**
3. **Under System Variables, select New to create the `ANT_HOME` environment variable.**
4. **Set the variable name to `ANT_HOME` and the variable value to *apache-install-dir*`\apache-ant-version` and click OK.**

   For example, the installation directory might be `C:\Java\apache-ant-1.7.0`.
5. **Select New again to create the `ANT_OPTS` environment variable.**

6. **Set the variable name to `ANT_OPTS` and the variable value to `-Xms256M -Xmx512M` and click OK.**
7. **Select the `PATH` environment variable and select Edit.**
8. **Add `%ANT_HOME%\bin` to the end or beginning of the `PATH`.**
9. **Click OK and then click OK again.**
10. **To test the setting, type `ant` at a command prompt and press Return.**
    - **If a `Build not found` error message appears, you have correctly installed Ant.**
    - **If you do not see an error message, check the environment variable settings and make sure they are pointing to the correct directory locations.**

▼ To Set the `ANT_HOME` Variable on a Linux or Macintosh System

1. **In your home folder, open the `.bash_profile` file in the root directory.**
2. **Add the following lines to the file, substituting the directory where you installed Ant:**

```
ANT_HOME=/apache-install-dir/apache-ant-version
ANT_OPTS="-Xms256M -Xmx512M"
PATH=$PATH:$HOME/bin:$ANT_HOME/bin
export ANT_HOME ANT_OPTS PATH
```

3. **To test the setting, type `ant` at a command prompt and press Return.**
    - **If a `Build not found` error message appears, you have correctly installed Ant.**
    - **If you do not see an error message, check the environment variable settings and make sure they are pointing to the correct directory locations.**

◆ ◆ ◆ CHAPTER 2

Web Space Server Installation Instructions

To install Web Space Server, download the single component installer (production bundle) for Sun GlassFish Web Space Server. The single component installer for Web Space Server is the version that is not bundled with Sun GlassFish Web Space Server and samples looks similar to `webspace-10-fcs-for-gfv2.zip`. You can configure it to a database installed on your disk. MySQL and Oracle 10g are the databases supported by Web Space Server. If your organization doesn't have a standard for local development databases, you can use MySQL.

Web Space Server is best suited to work on GlassFish v2, but it can also be installed on other versions of Sun GlassFish Web Space Server and also on other application servers. It is a part of the GlassFish Portfolio.

Unlike the evaluation bundle, which includes theGlassFish software and HSQL, the production bundle of Web Space Server can be installed only on an existing installation of an application server such as GlassFish.

The following sections provide instructions for using the production bundle for Web Space Server:

- "Installing the Database, Application Server, and Web Space Server" on page 34
- "Installing Updates from the Update Tool" on page 40
- "Installing Samples" on page 44
- "Configuring Web Space Server for Other Databases" on page 46
- "Updating WAR or Property Files" on page 49
- "Installing Web Space Server on Sun GlassFish Enterprise Server 2.1" on page 50

Installing the Database, Application Server, and Web Space Server

Perform the following procedure to configure Web Space Server on a Solaris system with UTF-8 support. For instructions about how to install MySQL on various other operating systems, see `http://dev.mysql.com/doc/refman/5.1/en/installing.html`.

Before You Begin

This section explains some basic requirements and concepts you should review before proceeding with Sun GlassFish Web Space Server 10.0 software installation.

System Requirements

See "Software and Hardware Requirements" in *Sun GlassFish Web Space Server 10.0 Installation Guide* for system requirements.

Installation Directories

Throughout these installation instructions, the root Web Space Server installation directory is referred to as <*webspace_dir*>.

When you unzip a core Web Space Server bundle (which looks similar to `webspace-`<*version*>`-for-glassfish.zip`), you get `webspace-for-glassfish` directory. You can install and configure Web Space Server from this directory. This directory is denoted by <*webspace_dir*>.

Platform-Specific Path Separators

The instructions and examples in this document use UNIX-style forward slash (/) path separators in file and command names. If Web Space Server and Sun GlassFish Enterprise Server are installed on a Windows system, be sure to use backslashes (\) instead of forward slashes; for example:

- **UNIX systems or Linux systems** — `glassfish/bin/asadmin`
- **Windows systems** — `glassfish\bin\asadmin`

▼ To Install and Configure MySQL

1 Install MySQL by typing the following commands as superuser.

```
# groupadd mysql
# useradd -g mysql mysql
# cd /usr/local
```

```
# gunzip install-dir/mysql-version-os.tar.gz | tar xvf -
# ln -s install-dir/mysql-version-os mysql
# cd mysql
# chown -R mysql .
# chgrp -R mysql .
# scripts/mysql_install_db --user=mysql
# chown -R root .
# chown -R mysql data
# bin/mysqld_safe --user=mysql & *
```

2 **Log in to the MySQL installation by going to the MySQL installation directory and typing the following command:**

```
mysql -u root
```

3 **Create the UTF-8 database by typing the following commands:**

```
mysql> create database lportal default character set utf8
mysql> use lportal;
mysql> create user lportal;
mysql> grant all privileges on *.* to 'lportal'@'localhost' identified by 'lportal';
mysql> set password for 'lportal'@'localhost' = password('lportal');
```

4 **Enable UTF-8 support for MySQL.**

See, "To Connect to a Database Other Than HSQL" on page 38

▼ To Install the GlassFish JAR Based Installer

Installing and starting GlassFish is a prerequisite for installing Web Space Server. The following procedure explains how to install the JAR based installer for GlassFish. The JAR based installer can be downloaded freely from the GlassFish server web site. You can use GlassFish V2 version and also the JAR based installer for GlassFish in case of desktop deployments of Web Space Server, which is used for development and testing of Web Space Server.

You can use the enterprise version of Web Space Server when you deploy Web Space Server in production environment. See, "Installing Web Space Server on Sun GlassFish Enterprise Server 2.1" on page 50.

1 **Download the GlassFish v2 distribution at**

```
https://glassfish.dev.java.net/downloads/v2.1-b60e.html
```

2 **Set the environment variable *JAVA_HOME* to point to the directory in which JDK 1.6 is installed.**

3 **Run the following command:**

```
#java -Xmx256m -jar filename.jar
```

4 **Set ANT_HOME to point to the installation of Ant 1.7 or above.**

Note – Ant 1.6.5 is the default Ant version for GlassFish. Make sure that `ANT_HOME` is not pointing to GlassFish Ant.

---

5 **Navigate to the GlassFish directory:**

```
cd glassfish
```

6 **Run the following command:**

```
ant -f setup.xml
```

7 **Start GlassFish.**

```
cd bin
```

<downloaded-dir>`/glassfish/bin>/asadmin start-domain`

▼ To Install Web Space Server

1 **Download the stand-alone version of Web Space Server.**

2 **Extract the Web Space Server bundle.**

```
unzip webspace-for-gfv2.zip
```

3 **Navigate to the Application folder.**

```
cd webspace-for-gfv2/webspace/application
```

4 **Run** `ant -f install-gfv2.xml`**.**

```
ant -f install-gfv2.xml
Buildfile: install-gfv2.xml

check-ant:

check-last-install:

set-last-install:

show-user-warning:
   [input] JAVA_HOME must be set to JDK 1.5 or greater and java must be availab
le in the execution path. GlassFish must be running. [RETURN to continue or CONT
ROL-C to stop]
```

```
set-glassfish-properties:
   [input] Enter GlassFish Directory  [\opt\glassfish]
<install-dir>\glassfish
   [input] Enter GlassFish Domain (include full path to domain)  [<install-dir>\glassfish\domains\domain1]

   [input] Enter GlassFish Target  [server]

   [input] Enter GlassFish Administrator [admin]

   [input] Enter GlassFish Administrator Password File (include full path to fi
le)  [full-path\gfpass.txt]

   [input] Enter GlassFish Administration Port  [4848]

   [input] Can installer deploy wars?  [true]


set-database-properties:
   [input] Use builtin HSQL or mySQL database  [HSQL]
mysql

set-hsql-properties:

set-mssql-properties:

set-mysql-properties:
   [input] Enter Database User Name  [root]

   [input] Enter Database User Password File (include full path to file)  [full-path\dbpass.txt]
//Place GlassFish admin password in a clear text file, and specify full path to it

   [input] Enter Database Host  [localhost]

   [input] Enter Database Port  [3306]

   [input] Enter Database Name  [lportal]
```

You need to set the application server and database properties in the process of running `install-gfv2.xml`. You have to specify path for a password file (a text file containing the password) for GlassFish. If MySQL is installed on your machine, stop GlassFish and choose MySQL instead of the HSQL database, and make changes to the `portal-ext.properties` file as described in the "To Connect to a Database Other Than HSQL" on page 38 section. Provide a password file, and restart GlassFish. Provide properties such as hostname, port number, and database name. Make sure that Ant version is 1.7 or greater and JDK is 1.6 or greater. GlassFish need to be running if you are installing on HSQL.

▼ To Connect to a Database Other Than HSQL

You need to make changes to the `JDBC` property in `portal-ext.properties` only when you are installing Web Space Server on GlassFish Enterprise Edition. It is not necessary to make these changes, when you are installing Web Space Server on the GlassFish JAR based installer.

1 **Create a temporary folder. In this example, the folder is named `test`.**

```
mkdir /tmp/test
```

2 **Copy the `portal-impl.jar` file to the tmp folder.**

The `portal-impl.jar` file contains resource bundles for Web Space Server.

```
cd GlassFish-install-dir/domains/domain1/application/j2ee-modules
cp webspace/WEB-INF/lib/portal-impl.jar /tmp/test
```

3 **Change to the `tmp` directory.**

```
cd /tmp/test
```

4 **Extract the `portal-impl.jar` file.**

```
jar -xvf portal-impl.jar
```

The `portal.properties` file will be placed in the tmp directory.

5 **Open the `portal.properties` file and copy the `JDBC` property.**

6 **Create a text file named `portal-ext.properties`, and paste the `JDBC`property into it.**

The Hypersonic (HSQL) and MySQL part of the JDBC property looks as below:

```
#
    # Hypersonic
    #
    jdbc.default.driverClassName=org.hsqldb.jdbcDriver
    jdbc.default.url=jdbc:hsqldb:lportal
    jdbc.default.username=sa
    jdbc.default.password=

    #
    # MySQL
    #
    #jdbc.default.driverClassName=com.mysql.jdbc.Driver
    #jdbc.default.url=jdbc:mysql://localhost/lportal?useUnicode=true&characterEncoding=
UTF-8&useFastDateParsing=false
    #jdbc.default.username=
    #jdbc.default.password=
```

7 **Comment Hypersonic (HSQL) and uncomment MySQL.**

Note – Properties in the portal properties file are commented using the hash (#) symbol. A property can be commented by placing a hash symbol in front of it.

8 **Save the** `portal-ext.properties` **file.**

9 **Create a directory structure** `webspace/WEB-INF/classes/` **under** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace/customs`**, and copy** `portal-ext.properties` **file to it.**

10 **Change directory to** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace`**.**

```
cd ZIP_ROOT/webspace-for-gfv2/var/webspace/war-workspace
```

11 **Run** `ant -f synchronize.xml`**.**

12 **Restart the GlassFish server.**

The server will redeploy `websynergy.war` and update `portal-ext.properties` under `applications/j2ee-modules/webspace/WEB-INF/classes`.

UTF-8 Support for Oracle 10g or Later

When you configure Web Space Server for Oracle, the `lportal` database needs to be created with `UTF-8` support.

```
CREATE DATABASE lportal
   CHARACTER SET [AL32UTF8|UTF8]
   NATIONAL CHARACTER SET AL16UTF16

CHARACTER SET Clause
```

Type the character set, the database uses to store data. The supported character sets and default value of this parameter depends on your operating system.

Restriction on the CHARACTER SET

Note – Do not specify the `AL16UTF16` character set as the database character set.

Specify the national character set used to store data in columns specifically defined as `NCHAR`, `NCLOB`, or `NVARCHAR2`. Values allowed are `AL16UTF16` and `UTF8`. The default value is `AL16UTF16`.

Also, refer to the Oracle Database Globalization Support Guide for information on Unicode data-type support. You can access this document at

http://download.oracle.com/docs/cd/B12037_01/server.101/b10749/toc.htm

Installing Updates from the Update Tool

Web Space Server updates and add-ons can be downloaded using the Sun GlassFish Update Tool.

Caution – If the user is behind a proxy, and is upgrading from a early version of Web Space Server (a version of Web Space Server which is earlier to Web Space Server 10.0 Update 5), the user need to use a workaround. For the instructions for using this workaround, see "To Use `updatetool` in a Proxy That Requires Authentication" on page 44.

First release of the product (Web Space Server 10.0) was bundled with Update Center 2.0 which was not supporting authenticated proxy setup. Sun GlassFish Web Space Server 10.0 Update 5 and later versions of Web Space Server are bundled with Update Center 2.2, with supports proxy authentication, and hence the workaround is not required.

Note – The version of Update Tool included with some versions of GlassFish Enterprise Server is not compatible with the Web Space Server Add-On package repositories. You must use the version of Update Tool that comes with Web Space Server 10.0 software.

Update Tool also includes a command-line (CLI) Image Packaging System (IPS) utility, called `pkg`, which provides the same core functionality as its GUI-based counterpart. This IPS tool is started with the webspace_dir/bin/pkg command. See the Update Center wiki for complete information about Update Tool and the `pkg` command.

▼ To Download the Updates Using Update Tool

1 **Start Update Tool by changing to the *webspace-dir*/`bin` directory and typing `updatetool`.**

- **If the Update Tool main window appears, proceed to Step 2.**
- **If a prompt appears asking whether to allow the installation of Update Tool to proceed:**

  a. **Type y to proceed.**

  The installer downloads and installs Update Tool and then exits. This process takes approximately 10 - 15 minutes.

b. Type the `updatetool` command again to start Update Tool.

The Update Tool main window appears.

2 Expand Web Space under the Application Images pane, and click Available Updates.

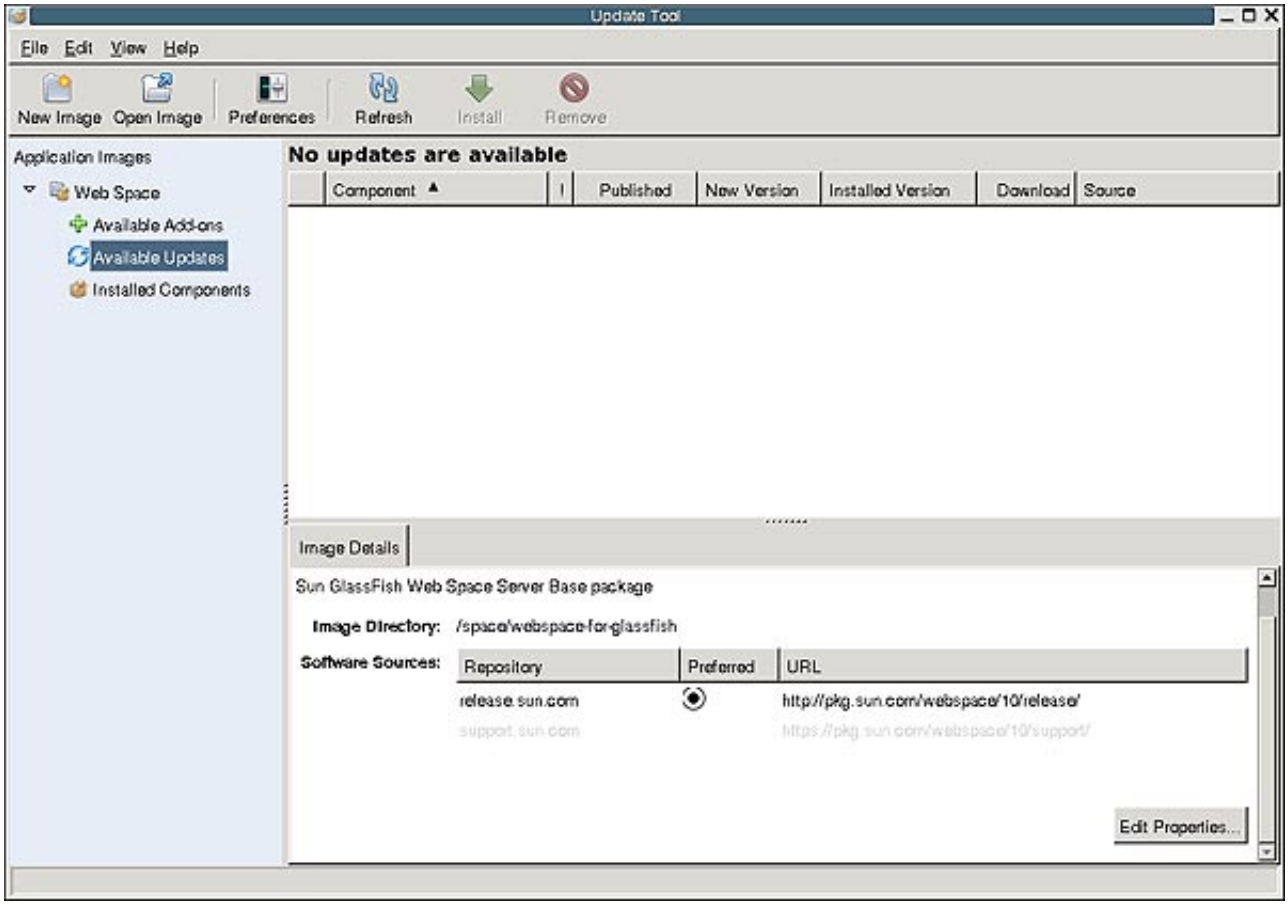

FIGURE 2–1 Update Tool

3 Click the Edit Properties button.

The Image Properties window is displayed.

4 Select the option `support.sun.com` repository, and choose Preferred.

The Repository Properties window appears.

5 **Provide the appropriate repository URL provided by Sun support, and click OK.**

The `support.sun.com` repository is highlighted.

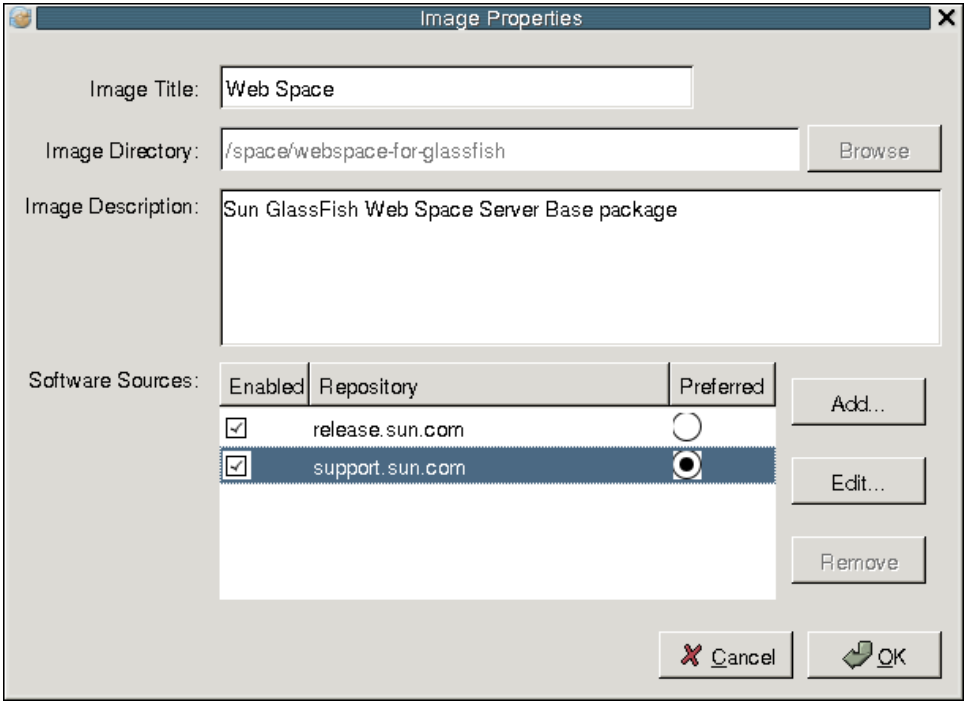

FIGURE 2–2 Selecting the `support.sun.com` repository

6 **Click OK again to enable the `support.sun.com` repository.**

The Update Tool main window is displayed.

7 **Expand Web Space under the Application Images pane, and select Available Add-ons.**

8 **Select the Web Space for GlassFish V2 component, and click install.**

9 **Restart the GlassFish server.**

```
cd <glassfish_dir>/bin
./asadmin stop-domain
./asadmin start-domain
```

10 **Change to the *webspace_dir*`/webspace/application` directory.**

11 **Run the** `ant install-gfv2.xml` **script to regenerate and redeploy the Web Space Server WAR files.**

```
ant -f install-gfv2.xml
```

12 **Restart the GlassFish server.**

```
cd <glassfish_dir>/bin
./asadmin start-domain
```

▼ To Download the Updates Using the CLI-Based *pkg* Tool

1 **Start Update Tool by changing to the** *webspace-dir*`/bin` **directory and typing** `updatetool`**.**

- **If the Update Tool main window appears, proceed to Step 2.**
- **If a prompt appears asking whether to allow the installation of Update Tool to proceed:**

  a. **Type y to proceed.**

  The installer downloads and installs Update Tool and then exits. This process takes approximately 10 - 15 minutes.

  b. **Type the** `updatetool` **command again to start Update Tool.**

  The Update Tool main window appears.

2 **Change to the** *webspace_dir*`/pkg/bin` **directory.**

3 **Type the following command to download updates:**

```
pkg set-authority -P --enable -O http://pkg.sun.com/webspace/10/ repository-name
```

Ask your SunSolve service representative for the correct repository name to use.

4 **Type the following commands to install the Update components.**

```
pkg image-update
```

5 **Restart the GlassFish server.**

```
cd <glassfish_dir>/bin
./asadmin stop-domain
./asadmin start-domain
```

6 **Change to the** *webspace_dir*`/webspace/application` **directory.**

7 **Run the** `ant install-gfv2.xml` **script to regenerate and redeploy the Web Space Server WAR files.**

```
ant -f install-gfv2.xml
```

8 **Restart the GlassFish server.**

```
cd <glassfish_dir>/bin
./asadmin start-domain
```

▼ To Use `updatetool` in a Proxy That Requires Authentication

This is a workaround to install Web Space Server from behind a proxy, when you are updating from a early version of Web Space Server. Sun GlassFish Web Space Server 10.0 Update 5 and later versions of Web Space Server are bundled with Update Center 2.2 which supports proxy authentication, and this workaround is not required.

1 **Download Update Center 2.2 suitable for your platform from Update Center Wiki.**

2 **Unzip the Update Center 2.2 to a temporary directory (i.e.** `/tmp/uc2.2`**)**

3 **Copy the files** `pkg-bootstrap.jar` **and** `pkg-client.jar` **from** `/tmp/uc2.2/pkg-toolkit-sunos-i386/pkg/lib` **to** <*webspace_dir*>`/webspace-for-gfv2/pkg/lib`**.**

4 **Navigate to** <*webspace_dir*>`/webspace-for-gfv2/bin`**, and run** `updatetool`**.**

You are prompted to type the proxy info and proxy port.

5 **Type the proxy info and proxy port information.**

The latest version of the `updatetool` and `pkg` files is downloaded.

6 **Run** `updatetool` **again to download Web Space Server packages.**

Installing Samples

This section provides the instructions to install samples, which is a bundle of sample communities, users, and some portlets which are not yet officially supported by Sun. Customers can use samples, depending upon their need and interest.

▼ To Install Samples

1. **Download the zip file for add-ons and copy it to the Web Space Server installation directory.**

   ```
   cp webspace-10-fcs-addon-samples.zip webspace-for-gfv2/
   ```

   ```
   cd webspace-for-gfv2/
   ```

2. **Extract the zipped folder for samples.**

   ```
   unzip webspace-10-fcs-addon-samples.zip
   ```

3. **Change to the `/webspace/samples` directory.**

   ```
   cd /webspace/samples
   ```

4. **Install the samples.**

   - **To install a single sample (for example, `socialspace.psar`), type**

     ```
     ant -f install-gfv2.xml
     ```

```
Buildfile: install-gfv2.xml

show-user-warning:
   [input] Ant must be 1.7 or greater. JAVA_HOME must be set to JDK 1.5 or greater.
[RETURN to continue or CONTROL-C to stop]


set-glassfish-properties:
   [input] Enter GlassFish Directory  [/opt/webspace-gfv2-sunos/glassfish2]
/<install-dir>/glassfish
   [input] Enter GlassFish Domain (include full path to domain)  [/<install-dir>/glassfish/domains/domain1]


set-psar-properties:
   [input] Enter psar file (include full path)  [samples/sample.psar]
/<install-dir>/webspace-for-gfv2/webspace/samples/samples/socialspace.psar
```

   - **To install all samples, type**

     ```
     ant -f install-all-gfv2.xml
     ```

```
Buildfile: install-all-gfv2.xml

show-user-warning:
   [input] Ant must be 1.7 or greater. JAVA_HOME must be set to JDK 1.5 or greater.
[RETURN to continue or CONTROL-C to stop]


set-glassfish-properties:
   [input] Enter GlassFish Directory  [/opt/webspace-gfv2-sunos/glassfish2]
```

```
/<install-dir>/glassfish
   [input] Enter GlassFish Domain (include full path to domain)  [/<install-dir>/glassfish/domains/domain1]


install:
    [echo] Stopping GlassFish...
    [echo] Execute /477/glassfish/bin/asadmin stop-domain if install hangs.
```

5 **Restart theGlassFish server.**

Configuring Web Space Server for Other Databases

MySQL 5.x (or later versions) or Oracle 10g (or later versions) are officially supported for a production environment. MySQL is the default database for the production environment but you can install and configure Web Space Server for other databases as well.

Configuring Web Space Server for Microsoft SQL

You must have the following software installed:

- .NetFramework 3.0 and above
- Windows Installer 4.5 and above
- Windows Power Shell

▼ To Install SQL Server Express 2008 With Management Tools

1 **Download SQL Server 2008 Express with Tools/SQL Server 2008 Express Advanced Series.**

2 **Run the** `SQLEXPRADV_x86_ENU.exe` **file.**

3 **Click the System Configuration Checker in the SQL Server Installation Center to see if all the prerequisites are installed.**

4 **Choose Installation.**

- **If you are doing a fresh installation, select the New SQL Server standalone installation.**
- **If you are upgrading an existing installation, select the Add Features to an Existing Installation option.**

5 **Type the product key and click Next.**

The product key setting page appears.

6. **Accept the licence terms and click Next.**

   The licence terms page appears.

7. **Click Install in the Set Up Support Files screen. Click Next on completing the setup.**

8. **In the Features Selection screen that appears, select the Database Engine Services and ManagementTools-Basic features.**

9. **Type `MSSQLSERVER` in the Named instance and Instance ID boxes for Instance configuration. Click Next.**

   See `http://msdn.microsoft.com/en-us/library/ms165614.aspx` for more information about configuration.

10. **Make the following changes in the Server Configuration page**

    a. **Use `NT AUTHORITY\SYSTEM` as the account name for SQL Server Database engine.**

    b. **Change the SQL Server browser startup to Automatic.**

    Other settings remain the same.

11. **Do the following changes in the Database Engine Configuration screen:**

    a. **Select Mixed Node so that the built in admin user `sa` can be user for authorization in addition to Windows authorization.**

    b. **Provide a password for the account `sa`.**

    c. **Click Next and wait till the installation is complete.**

▼ To Start Microsoft SQL Server

1. **Run MSSQL Server Configuration Manager.**

2. **Navigate to SQL Server Network Configuration → Protocols for SQL SERVER. Enable TCP/IP and Named Pipes. SQL server uses port 1433 by default.**

3. **Right-click SQL Server Services and choose SQL Server from the pop-up menu. Click Start.**

4. **Verify that Microsoft SQL is running.**

   You can verify this on the Solaris platform by running the `netstat -an | grep 1433` command in a terminal window.

▼ To Connect to Microsoft SQL Using the Management Studio tool

1. **Run SQL Server Management Studio.**
2. **Navigate to File → Connect Object Explorer.**
3. **Apply the following settings:**
   - Server Type: Database Engine
   - Server Name: Name of the computer
   - Authentication : SQL Server Authentication.
     In order to use SQL Server authentication, you need to select the Mixed Mode (Windows authentication + SQL Server authentication) option while installing Microsoft SQL.
     - Login : sa
     - Password : MSSQL administrator password assigned during installation
4. **Click Connect.**
5. **Select New Query in the Management Studio tool.**
6. **Type `create database lportal` and click Execute.**
   The message "Query executed successfully" is displayed on successful creation of the database named `lportal`.

▼ To Configure Web Space Server to Use Microsoft SQL

1. **Add the following text to the`portal-ext.properties` file in the*Root-Dir*`/webspace-for-gfv2/var/webspace/war-workspace/customs/webspace/WEB-INF/classes` directory.**

```
# SQL Server
    #
    jdbc.default.driverClassName=net.sourceforge.jtds.jdbc.Driver
    jdbc.default.url=jdbc:jtds:sqlserver://localhost:1433/lportal
    jdbc.default.username=sa
    jdbc.default.password=<admin password set for MsSQL>
```

2. **Download the jTDS JDBC driver from `http://jtds.sourceforge.net/`.**
3. **Copy the JAR file to the *GlassFish-install-dir*`/domains/domain1/lib` directory.**
4. **Restart the GlassFish server.**

Updating WAR or Property Files

The process for updating a deployed WARor property file in Sun GlassFish Web Space Server is complex.

The following procedure describes how to update the `portal-ext.properties` file. Similarly, you can update a deployed WAR file.

▼ To Update the `portal-ext.properties` File and a WAR File

1. **Install the Web Space Server core zip file.**
2. **Create the directory structure** `webspace/WEB-INF/classes` **under** *install-dir*`/webspace-for-gfv2/var/webspace/war-workspace/customs`**.**
3. **Create a dummy** `portal-ext.properties` **file with the following entry in it:**

   ```
   dummy.property=true
   ```

4. **Change to the** *install-dir*`/webspace-for-gfv2/var/webspace/war-workspace` **directory.**
5. **Run** `ant -f synchronize.xml`**.**
6. **Restart the GlassFish server.**

   The server will redeploy `webspace.war` and update `portal-ext.properties` in the directory *GlassFish install-dir*`/domains/domain1/application/j2ee-modules/webspace/WEB-INF/classes`.
7. **Now add the OpenSSO add-on. Make sure to update the** `AMConfig.properties` **and** `portal-ext.properties` **files.**
8. **Restart the GlassFish server.**
9. **The portal-ext.properties file now contains the property** `dummy.property=true` **and OpenSSO related properties.**

   You can use the same process for any other WAR file.

Installing Web Space Server on Sun GlassFish Enterprise Server 2.1

Upgrade versions of Web Space Server can only be installed on GlassFish Enterprise Server 2.1 because only the enterprise version can be upgraded to GlassFish 2.1 patch 01. GlassFish 2.1 can be patched to GlassFish 2.1 patch 01 only if GlassFish 2.1 is an Enterprise Edition server (EE version) and not the open source version which uses a `JAR` based installer.

You can find the instructions to install Web Space Server on a cluster of Sun GlassFish Enterprise Server in the *Web Space Server Deployment Guide*.

▼ To Install Web Space Server on Sun GlassFish Enterprise Server 2.1

1. **Install Sun GlassFish Enterprise Server 2.1 on your machine.**
2. **Install Web Space Server 10.0.**
   a. **Download `webspace-for-gfv2.zip` and unzip it.**
   b. **Stop the Sun GlassFish Enterprise Server 2.1.**
   c. **Add the following code to the `server.policy` file in the `glassfish/domains/domain1` folder.**

```
grant codeBase "file:${com.sun.aas.instanceRoot}/lib/-" {
   permission java.security.AllPermission;
};

// permissions for Webspace
grant codeBase "file:${com.sun.aas.instanceRoot}/applications/j2ee-modules/webspace/-" {
   permission java.security.AllPermission;
};

grant codeBase "file:${com.sun.aas.instanceRoot}/applications/j2ee-modules/saw-web/-" {
  permission java.security.AllPermission;
}; // Basic set of required permissions granted to all remaining code
grant {
..............
..............
permission java.lang.reflect.ReflectPermission "suppressAccessChecks";
};

grant codeBase "file:${com.sun.aas.instanceRoot}/applications/j2ee-modules/ruon-web/-" {
```

```
permission java.security.AllPermission;
};

grant codeBase "file:${com.sun.aas.instanceRoot}/applications/j2ee-modules/wsrp-portlet/-" {
permission java.security.AllPermission;
};
```

Note – You need to grant permissions for any `web-app` that tries to create database tables. For example, you will have to add the permission blocks for `CommunityMapper` and `opensso-web` also, in the same way as you added permission blocks for `webspace` and `saw-web`.

3. **Update the** `portal-ext.properties` **file with** `auto.deploy.glassfish-tomcat.jee.dm.id=deployer:Sun:AppServer::localhost:4848:https`

   The `portal-ext.properties` file is located in *ws_install_dir*`/var/webspace/war-workspace/customs/webspace/war-workspace/customs/webspa`

4. **Change to the** `ws_install_dir/webspace/application` **directory and run** `ant -f install.xml`**.**

◆ ◆ ◆ CHAPTER 3

Customizing Sun GlassFish Web Space Server

This chapter describes some simple customization tasks, most of which can be done from the user interface of Web Space Server. For more serious changes to the product configuration, you need to make changes to the `portal-ext.properties` file. A simple example for making changes to the `portal-ext.properties` file, see "Localization Support" on page 60. For details of properties in the `portal-ext.properties` file, see "Customizing Web Space Server Using the portal-ext.properties File" on page 175. The following sections describes how to customize Web Space Server

- Branding and Site Identity
- Friendly URLs
- Site Layout and Navigation
- Using Bundled Web Space Server Portlets
- "Look and Feel and Configuration of Portlets" on page 57
- "Localization Support" on page 60

Branding and Site Identity

You can use Web Space Server on your web site to customize the branding to establish your site identity.

▼ To Change the Banner Logo

1. **Log in to Sun GlassFish Web Space Server as the admin user.**
2. **Choose Control Panel → Portal → Settings from the Welcome menu.**
3. **Click the Change link.**

   You are prompted to browse and select a new banner logo.

4 **Select the file to use for the logo.**

▼ To Change the Address Bar and Browser Tab Icons

1 **Navigate to the directory that contains the Web Space Server installation.**

2 **Change to the** `var/webspace/war-workspace`**directory.**

`cd` *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace`.

3 **Change to the** `customs/webspace/html/themes/classic/images` **directory, and place** `liferay.ico` **image in the folder.**

Note – The default icon for the address bar and browser tabs is named `liferay.ico`. You can override the icon with an image with the same name.

---

4 **After any customization you need to run** `ant -f synchronize.xml` **at the root of the customs folder.**

a. **Change to the** `ZIP_ROOT/webspace-for-gfv2/var/webspace/war-workspace` **directory.**

`cd` *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace`

b. **Run** `ant -f synchronize.xml`

This will prompt for the war to synchronize, choose the default (which is webspace).

5 **Restart the GlassFish server.**

6 **Clear the browser cache and reload the page.**

Friendly URLs

Friendly URL is the part of the URL for a page on Web Space Server that can be customized as desired.

▼ To Change the Friendly URL of a Page

1 **Log in to Sun GlassFish Web Space Server as the admin user.**

2 **Choose Manage Pages from the Welcome menu.**

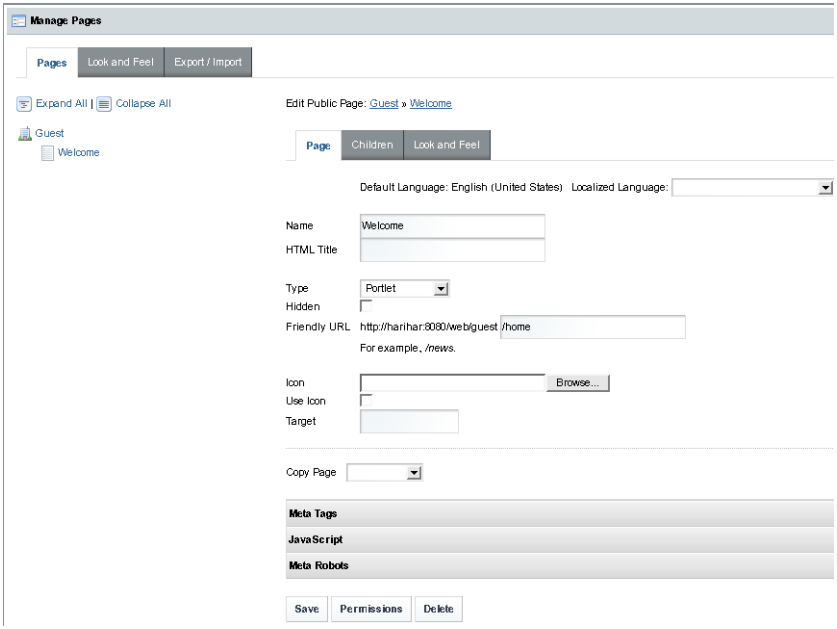

FIGURE 3–1 Manage Pages Page

The Friendly URL for the Welcome page in the Guest community is `http://`*machine-name*`:8080/web/guest/home`. You can directly access the PeopleSpace page by typing this URL. `http://`*machine-name*`:8080/web/guest/home`.

3 Change the value of the Friendly URL to the value you like.

For example, you can change it from `home` to `my_home`.

4 Click Save.

A message saying that the page is not found appears. For the changed URL to take effect, log out of Web Space Server and then log in again.

The changed URL for the PeopleSpace page is `http://`*machine-name*`:8080/web/guest/my_home`.

Site Layout and Navigation

Layout Templates enables you to choose how your portlets are arranged on a page. They make up the body of your page, the large area where you drag and drop your portlets to create your pages. Web Space Server comes with several built-in layout templates. However, if you have a

complex page layout (especially for your home page), you might want to create a custom layout template of your own. See the development document in Liferay Documentation for the procedure to create a custom Layout Template.

▼ To Change the Site Layout

1. **Log in to Sun GlassFish Web Space Server as the admin user.**
2. **Choose Layout Template from the Welcome menu.**

   The Layout page appears.
3. **Select the layout you want to use and click Save.**

Changing the Page Theme

Themes are hot deployable plugins that can completely transform the look and feel of the portal. Most organizations have their own look and feel standards for all the web sites and web applications in their infrastructure. Web Space Server enables site designers to create and install a theme plugin that can transform the portal to whatever look and feel is needed. See the development document in Liferay Documentation for the procedure to create a custom theme.

▼ To Change the Page Theme

1. **Log in to Sun GlassFish Web Space Server.**

   Any user can change themes, but only the admin user has access to all available themes, and has the privilege to install more themes.
2. **Choose Manage Pages from the Welcome menu.**
3. **Click the Look and Feel tab.**

   The current theme for the page and its associated color schemes, and all the available themes, are displayed.
4. **To change the theme, choose a theme from Available Themes.**

   The theme is applied to your page.
5. **Click Save.**

Using Bundled Web Space Server Portlets

A wide array of portlets is bundled with Web Space Server as part of its core and samples.

▼ To Add Bundled Web Space Server Portlets

1. **Log in to Sun GlassFish Web Space Server.**
2. **Choose Add Applications from the Welcome menu.**
3. **Locate the desired portlet.**

   You can search for a portlet by providing a search string for it or by expanding the portlet folder and clicking Add next to a selected portlet. For example, to add some social networking portlets to your page, expand the Social folder. You can add Activities and Requests portlets to your page by clicking the Add button corresponding to the portlet.
4. **Add the required portlet to your page by clicking the Add button next to the portlet.**

Look and Feel and Configuration of Portlets

You can customize the display name and look and feel of a portlet.

Changing the Name of a Portlet

You can change the display name of a portlet.

▼ To Change the Name of a Portlet Located on a Private Page

1. **Log in to Sun GlassFish Web Space Server.**
2. **Click the menu bar of a portlet.**

   For example, click the menu bar of the Languages portlet.

FIGURE 3–2 Changing the Display Name of a Portlet

3 **Edit the name of the portlet, and click outside the name box for the change to take effect.**
In this example, change the name of the portlet to Locales.

FIGURE 3–3 Changed Display Name

▼ To Change the Name of a Portlet Located on a Public Page

1 **Log in to Sun GlassFish Web Space Server as any user.**

2 **Navigate to a public page of the user by choosing My Places on the Welcome menu.**

3 **Edit the portlet name.**

   a. **Click the menu bar of a portlet**

   b. **Edit its name.**

   c. **Leave the menu bar**

Customizing the Look and Feel and Configuration of a Portlet

You can customize the look and feel and configuration of a portlet. The menu bar of a portlet displays its name and the menu controls associated with it. All portlets have Look and Feel and Configuration menu controls, and some portlets have an additional menu control.

Note – In order to access the menu controls of a portlet, Toggle Edit Controls must be set on. You can set Toggle Edit Controls from the Welcome menu.

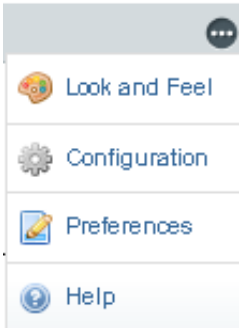

FIGURE 3–4 Look and Feel and Configuration Menu Controls of a Portlet

Look and Feel Menu Control of a Portlet

Clicking the Look and Feel menu control button displays a window that provides options to customize the look and feel of the portlet.

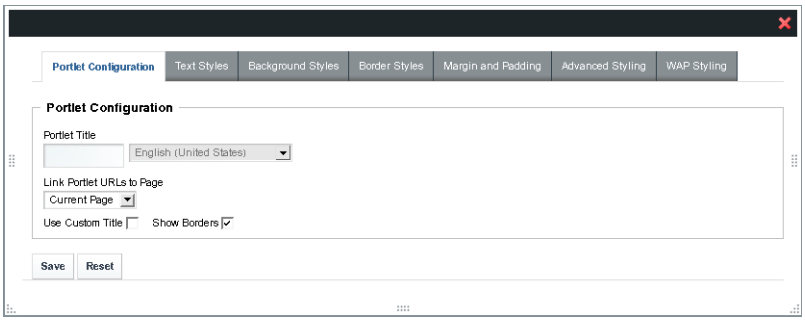

FIGURE 3–5 Customizing the Look and Feel

This section describes the options in the Look and Feel window tabs.

Portlet Configuration Tab

The Use Custom Title option enables you to change the title of the Portlet. The Show Borders option enables or disables the display of borders.

Text Styles Tab

Using this tab, you can change the default settings for text such as font, size, color, alignment, bold, and italic.

Background Styles Tab

Using this tab, you can change the default background color for the portlet.

Border Styles Tab

Using this tab, you can change the border styles for the portlet. You can change the default settings for the border width, border style, and border color. You can set different width, style, and colors for different borders by disabling the Same for All option.

Margin and Padding Tab

Using this tab, you can change the default margin and padding settings. Be careful when changing the default margin and padding settings.

Advanced Styling Tab

Using this tab, you can define CSS rules for the portlet and all similar portlets.

WAP Styling tab

Using this tab, you can define the styling for mobile handsets.

Configuration Menu Control of a Portlet

Clicking the Customization button displays a window through which you can configure permissions for the portlet, can export or import the portlet data, and can enable sharing on the portlet or widget.

For a detailed example of using the Configuration button to enable sharing of portlets, see "Enabling Sharing of a Portlet" on page 85

Localization Support

Web Space Server is localized out-of-box in 22 languages. Sun provides localization support for Japanese (`ja`) and Simplified Chinese (`zh_CN`) but support for others is community driven.

The following sections describe how to perform localization:

- "Setting the User-Preferred Language in Web Space Server" on page 61
- "Adding a New Language Support" on page 61
- "Removing Localization Support for Unwanted Languages" on page 64
- "Enabling the Guest Users to Select a Browser Language" on page 65
- "Precedence Hierarchy for `Language.properties` Files" on page 66
- "Changing the Existing Language Entries" on page 67
- "To Customize the Name of a Portlet While Localizing the User Interface" on page 68

Setting the User-Preferred Language in Web Space Server

Users can use Web Space Server in any of the supported languages.

▼ To Set a User-Preferred Language

1. **Log in to Web Space Server.**
2. **Choose My Account from the Welcome menu.**
   The Control Panel is displayed.
3. **Choose Display Settings under Miscellaneous in the menu on the right.**
4. **Select a language from the Language drop-down list.**
5. **Click Save.**
   The user interface changes to the language selected.

Note – You can use the same page to change the time zone and the greeting message.

Adding a New Language Support

You can add localization support for a language that is not supported by Web Space Server by default. This section describes how you can add localization support for a new language.

▼ To Add New Language Support

This task describes how to create a `portal-ext.properties` file, and make changes to it to support localization.

1. **Create a temporary folder. In this example, name the folder as test.**

   ```
   mkdir /tmp/test
   ```

2. **Copy** `portal-impl.jar` **to the tmp folder.**

   The `portal-impl.jar` file contains resource bundles for Web Space Server. This JAR file is located in the *GlassFish install-dir*`/domains/domain1/application/j2ee-modules/webspace/WEB-INF/lib/` directory.

   ```
   cd GlassFish-install-dir/domains/domain1/application/j2ee-modules
   cp webspace/WEB-INF/lib/portal-impl.jar /tmp/test
   ```

3. **Change to the** `tmp` **directory.**

   ```
   cd /tmp/test
   ```

4. **Extract the** `portal-impl.jar` **file.**

   ```
   jar -xvf portal-impl.jar
   ```

   The `portal.properties` file will be placed in the current directory.

5. **Open** `portal.properties` **and copy the** `locales` **property from the** `Languages and Time Zones` **section.**

6. **If a** `portal-ext.properties` **file does not already exist, create a text file with that name.**

   The default location of `portal-ext.properties` is *GlassFish home*`/applications/j2ee-modules/webspace/WEB-INF/classes/portal-ext.properties`.

7. **Paste the** `locales` **property into the** `portal-ext.properties` **file.**

8. **Add the new locale at the end of the** `locales` **property in the format** *LanguageCode_CountryCode***.**

   See the following links to find language and country codes:

   - `http://ftp.ics.uci.edu/pub/ietf/http/related/iso639.txt` for language codes.
   - `http://userpage.chemie.fu-berlin.de/diverse/doc/ISO_3166.html` for country codes.

   For example, if you are adding support for Hindi, you need to add `hi_IN` at the end of `locales` property as follows:

   ```
   locales=ar_SA,ca_AD,ca_ES,zh_CN,zh_TW,cs_CZ,nl_NL,en_US,fi_FI,fr_FR,de_DE,el_GR,hu_HU,
   it_IT,ja_JP,ko_KR,nb_NO,fa_IR,pt_BR,ru_RU,es_ES,sv_SE,tr_TR,vi_VN,hi_IN
   ```

9. **Save the** `portal-ext.properties` **file.**

10 **Navigate to the** `content` **folder and open the** `Language.properties` **file.**

Note – A folder named `content` was created when you extracted the `portal-impl.jar` file.

11 **Translate all the strings you want to localize from** `temp/test/content/Language.properties` **to the new language.**

12 **Rename the translated** `Language.properties` **file to** `Language-ext_`*LanguageCode*`.properties.native`**.**

13 **Run the following command on the directories that contains the** `Language-ext_`*LanguageCode*`.properties.native` **file:**

```
native2ascii -encoding UTF-8 Language-ext_LanguageCode.properties.native
Language-ext_LanguageCode.properties
```

14 **Create a directory structure** `webspace/WEB-INF/classes/` **under** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace/customs`**, and copy** `portal-ext.properties` **file to it.**

15 **Create a directory structure** `webspace/WEB-INF/classes/content` **under** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace/customs`**, and copy** `Language-ext_`*LanguageCode*`.properties.native` **file to it.**

16 **Change to the** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace` **directory.**

```
cd ZIP_ROOT/webspace-for-gfv2/var/webspace/war-workspace
```

17 **Run** `ant -f synchronize.xml`**.**

18 **Restart theGlassFish server.**

▼ To Verify the Localization of the Interface

1 **Log in to Web Space Server as the admin user.**

2 **Choose My Account from the Welcome menu.**

The Control Panel is displayed.

3 **Choose Display Settings under Miscellaneous.**

The new language setting is reflected in the Language drop-down menu.

4 **Select the language for the user and click Save.**

The user interface is changed to the new language.

Removing Localization Support for Unwanted Languages

Generally, users don't require localization support for all languages that are supported by Web Space Server. This section describes how you can remove localization support for the languages that are not required.

▼ To Remove Localization Support for Unwanted Languages

1 **Create a temporary folder. In this example, name the folder as test.**

```
mkdir /tmp/test
```

2 **Copy** `portal-impl.jar` **to the tmp folder.**

`portal-impl.jar` contains language resource bundles for Web Space Server. This JAR file is located in the *GlassFish install-dir*`/domains/domain1/application/j2ee-modules/webspace/WEB-INF/lib/` directory.

```
cd GlassFish-install-dir/domains/domain1/application/j2ee-modules
cp webspace/WEB-INF/lib/portal-impl.jar /tmp/test
```

3 **Change to the** `tmp` **directory.**

```
cd /tmp/test
```

4 **Extract the** `portal-impl.jar` **file.**

```
jar -xvf portal-impl.jar
```

5 **Open** `portal.properties` **and copy the** `locales` **property from the** `Languages and Time Zones` **section.**

6 **If** `portal-ext.properties` **does exist in Web Space Server then paste the** `locales` **property into it. Otherwise, create a text file (using any text editor) and name it as** `portal-ext.properties`**, and paste the** `locales` **property into it.**

Default location of `portal-ext.properties` is *GlassFish home*`/applications/j2ee-modules/webspace/WEB-INF/classes/portal-ext.properties`.

7 **Edit the** `locales` **property to include only the languages that are needed.**

For example, if you want to support only English, German and Spanish, remove all the unwanted locales so that the `locales` value looks as follows:

```
locales=en_US,de_DE,es_ES
```

8 **Save the** `portal-ext.properties` **file.**

9. **Create a directory structure** `webspace/WEB-INF/classes/` **under** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace/customs`**, and copy the** `portal-ext.properties` **file to it.**

10. **Change to the** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace` **directory.**

    `cd` *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace`

11. **Run** `ant -f synchronize.xml`**.**

12. **Restart the GlassFish server.**

    The server will redeploy `websynergy.war` and update `portal-ext.properties` under `applications/j2ee-modules/webspace/WEB-INF/classes`.

Enabling the Guest Users to Select a Browser Language

Guest users can select their preferred browser language.

▼ To Enable Guest Users to Select a Browser Language

1. **Create a temporary folder, named test.**

   `mkdir /tmp/test`

2. **Copy** `portal-impl.jar` **to the tmp folder.**

   `portal-impl.jar` contains language resource bundles for Web Space Server. This JAR file is located in the *GlassFish install-dir*`/domains/domain1/application/j2ee-modules/webspace/WEB-INF/lib/` directory.

   `cd` *GlassFish-install-dir*`/domains/domain1/application/j2ee-modules`

   `cp webspace/WEB-INF/lib/portal-impl.jar /tmp/test`

3. **Change to the** `tmp`**directory.**

   `cd /tmp/test`

4. **Extract the** `portal-impl.jar` **file.**

   `jar -xvf portal-impl.jar`

   The `portal.properties` file will be placed in the current directory.

5. **Open** `portal.properties` **and copy the** `locale.default.request` **property from the** `Languages and Time Zones` **section.**

6. **If** `portal-ext.properties` **does exist in Web Space Server then paste the** `locale.default.request` **property into it. Otherwise, create a text file (using any text editor) and name it as** `portal-ext.properties`**, and paste the** `locale.default.request` **property into it.**

   Default location of `portal-ext.properties` is *GlassFish home*`/applications/j2ee-modules/webspace/WEB-INF/classes/portal-ext.properties`.

7. **Set the property to** `locale.default.request=true`**.**

8. **Save the** `portal-ext.properties` **file.**

9. **Create a directory structure** `webspace/WEB-INF/classes/` **under** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace/customs`**, and copy the** `portal-ext.properties` **file to it.**

10. **Change to the** *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace`**directory.**

    `cd` *ZIP_ROOT*`/webspace-for-gfv2/var/webspace/war-workspace`

11. **Run** `ant -f synchronize.xml`**.**

12. **Restart the GlassFish server.**

    It will redeploy `websynergy.war` and update `portal-ext.properties` under `applications/j2ee-modules/webspace/WEB-INF/classes`. Clear browser cookies before accessing Web Space Server interface to allow the changes to take effect.

Precedence Hierarchy for `Language.properties` Files

Language and display information is defined in the `Language.properties`, as well as various other `Language_`*LanguageCode*`.properties` files for foreign languages. When you extract the `portal-impl.jar` file, these files are placed in the `content` folder. `Language.properties` is the primary and default language definition file, but definitions in that file may be overridden by language-specific definitions. For example, the file `Language_en.properties` contains the English versions of most of the definitions, the file `Language_fr.properties` contains the French version, and so on.

Language files can further have locale-specific definitions. The `Language_en_US.properties` file contains English phrase variations further defined for the United States. Other languages can also have locale-specific definitions.

Rules of Precedence

The hierarchy of precedence for different `Language.properties` files is:

1. `Language-ext.properties` takes precedence over `Language.properties`.
2. Language-specific versions take precedence over the non language-specific versions. For example, `Language_en.properties` takes precedence over `Language.properties`.
3. Location-specific versions take precedence over the non location-specific versions. For example, `Language_en_US.properties` takes precedence over `Language_en.properties`.

For the `Language.properties` file for English, `Language-ext_en_US.properties` has the highest precedence and the `Language.properties` file has the least precedence. The hierarchy is:

1. `Language-ext_en_US.properties`
2. `Language_en_US.properties`
3. `Language-ext_en.properties`
4. `Language_en.properties`
5. `Language-ext.properties`
6. `Language.properties`

Changing the Existing Language Entries

You can easily change existing English and foreign languages entries in Web Space Server. Consider the example of changing the name of a portlet from Message Boards to Forums. To do this when English is the default language, you would create the `Language-ext_en.properties` to override the `Language_en.properties` file. In `Language-ext_en.properties`, duplicate the content in the `Language_en.properties` file, and replace the entry `javax.portlet.title.19=Message Boards` with `javax.portlet.title.19=Forums`. The portlet Message Boards is renamed to Forums.

You can also add new language entries for customization or for new portlets. For example, you can create an entry similar to `javax.portlet.title.EXT_1=Reports` to add the name of a new portlet named *Reports*.

Customizing Portlet Names While Localizing

You can customize the name of a ported for any language by using the Look and Feel button on the portlet. Consider the example of localizing Web Space Server to French. In this case, the name of the Admin portlet translates as `Administration du portail`. You might prefer to have a customized name for the Admin portlet when Web Space Server is localized to French.

▼ To Customize the Name of a Portlet While Localizing the User Interface

1. **Log in to the Web Space Server as the admin user.**
2. **Click the Look and Feel button on a portlet.**
   In this example, click the Look and Feel button on the Admin portlet.
3. **Select the Use Custom Title option.**
4. **Select a language from the language list.**
   In this example, select French.
5. **Type a title for the portlet in the selected language in the Portlet Title box.**
   In this example, type the name `Administration`.
6. **Click Save.**

   Note – For the changes to take effect, you may have to save twice: once with the Use Custom Title option deselected and again with selected. Some times the portlet name in the default language too may have changed. You need to verify this.
7. **Choose My Account from the Welcome menu.**
8. **Choose Display Settings under Miscellaneous.**
9. **Select a language from the Language list that is the same as the language selected previously.**
   For example, select French.
10. **Click Save and navigate back to the community page.**
    You can see the changed name of the portlet in the localized version. In this example, the name of the Admin portlet localized to French is changed from `Administration du portail` to `Administration`.

◆ ◆ ◆ CHAPTER 4

Use Cases for Sun GlassFish Web Space Server

The following are some of the use cases for working with portlets that are generally available as part of the core and the samples for Sun GlassFish Web Space Server.

- "Use Case for Enterprise Social Networking" on page 70 - Introduces some of the portlets which are helpful for Enterprise Social Networking.
- "Using the Expense Report Portlet" on page 70 - Introduces the Expense Report portlet that enables expenses reclaim using Sun GlassFish Web Space Server.
- "Working With Communities and Organizations" on page 78 - Introduces some of the important tasks that an administrator can perform on Communities and Organizations:
  - "Adding Public and Private Pages to Communities and Organizations" on page 78
  - "Enabling Crawling of Page URLs by Search Engines" on page 79
- "Virtual Hosting of Portal Pages" on page 80 - Explains the procedure for virtual hosting of portal pages.
- "Using the Mail Portlet" on page 82 - Explains how you can configure your mail client on Web Space Server using the Mail portlet.
- "Exporting and Importing of Portal Data" on page 83 - Explains how to export and import data that is on a portlet, a Community, or an Organization.
- "Enabling Sharing of a Portlet" on page 85 - Explains how you can share portlets with an external web sites and Facebook.
- "Using Document Library Plugins on OpenOffice" on page 89 - Explains how you can use Document Library plugins on OpenOffice to interface with Content Management feature of Web Space Server.
- "Using the Widget Consumer Portlet" on page 90 - Explains how you can use the Widget Consumer Portlet to display the information from external widgets.
- "Workflow Portlet" on page 92 - Explains how an admin user can define a workflow that can be used by other users.
- "Tagging in Web Space Server" on page 99 - Explains how you can use the tagging system.

Use Case for Enterprise Social Networking

Sun GlassFish Web Space Server supports Enterprise Social Networking. This section introduces some of the portlets that are helpful for Enterprise Social Networking. These portlets are bundled as part of samples.

You can view the list of your friends and their profiles on the Friends widget.

▼ To Add a Friend

This procedure uses the Search and Invite Friends widget and the Requests widget to add a friend to the Friends widget.

1. **Log in to Web Space Server.**

   Select Social Networking Sample Users from the Sample Users portlet and click the Admin User link.

2. **Add the Search and Invite Friends and Requests widgets to a private page.**

3. **Click the Search Users button in the Search and Invite Friends widget.**

4. **Select a user and click the Add as Friend link corresponding to the user.**

   In this example, click the Add as Friend link corresponding to the user Chris Editor.

5. **Log out and log in again as the user you selected as friend.**

   In this example, select Social Networking Sample Users from Sample Users portlet and click the Chris Editor link.

6. **Click the Confirm link in the Requests portlet.**

   The admin user and Chris Editor are now friends and can chat with each other. The Online Friends and Settings options in the menu bar on the right-bottom of the page are helpful in chatting and in displaying the online status of friends.

Using the Expense Report Portlet

The Expense Report widget models the expense reports process that is typical in any large organization. An Expense Report is a report comprising details of the expenses (such as business travel, relocation, broadband bills claim) incurred by an employee that can be reclaimed from the organization.

An Expense Report created by employees can be approved by their superior. Users available to the system are mapped to either the Employee role or the Manager role. Consider the following example:

Paul Tester (Employee) submits an Expense Report for a business trip. Mary Manager (Manager) verifies and approves the Expense Report.

The following is the process involved:

1. Paul Tester submits an Expense Report. Paul performs the following steps to submit his report:
   a. Paul selects the expense category, and types an expense amount and description and saves the report. The system assigns a unique expense ID to the report.
   b. Paul reviews the report summary.
   c. Paul submits the saved report for approval by his manager.
2. Mary Manager verifies the details of the Expense Report. She can either approve or reject the report.

The following procedures explain how to submit and approve an expense report:

- "To Submit an Expense Report" on page 71
- "To Approve an Expense Report" on page 75

▼ To Submit an Expense Report

To access the Expense Report portlet, you need to select the Edit Preferences button from the menu controls and enable the JavaCAPS Workflow engine. The Workflow engine service needs to be available in order to use the Expense Report portlet.

1 Log in to Web Space Server as Paul Tester.

2 Click the Add a New Expense Report link.

3 Type a description for the Expense Report.

Type the values for Item Description, Amount, and Date fields. Click Add Item to add a new row.

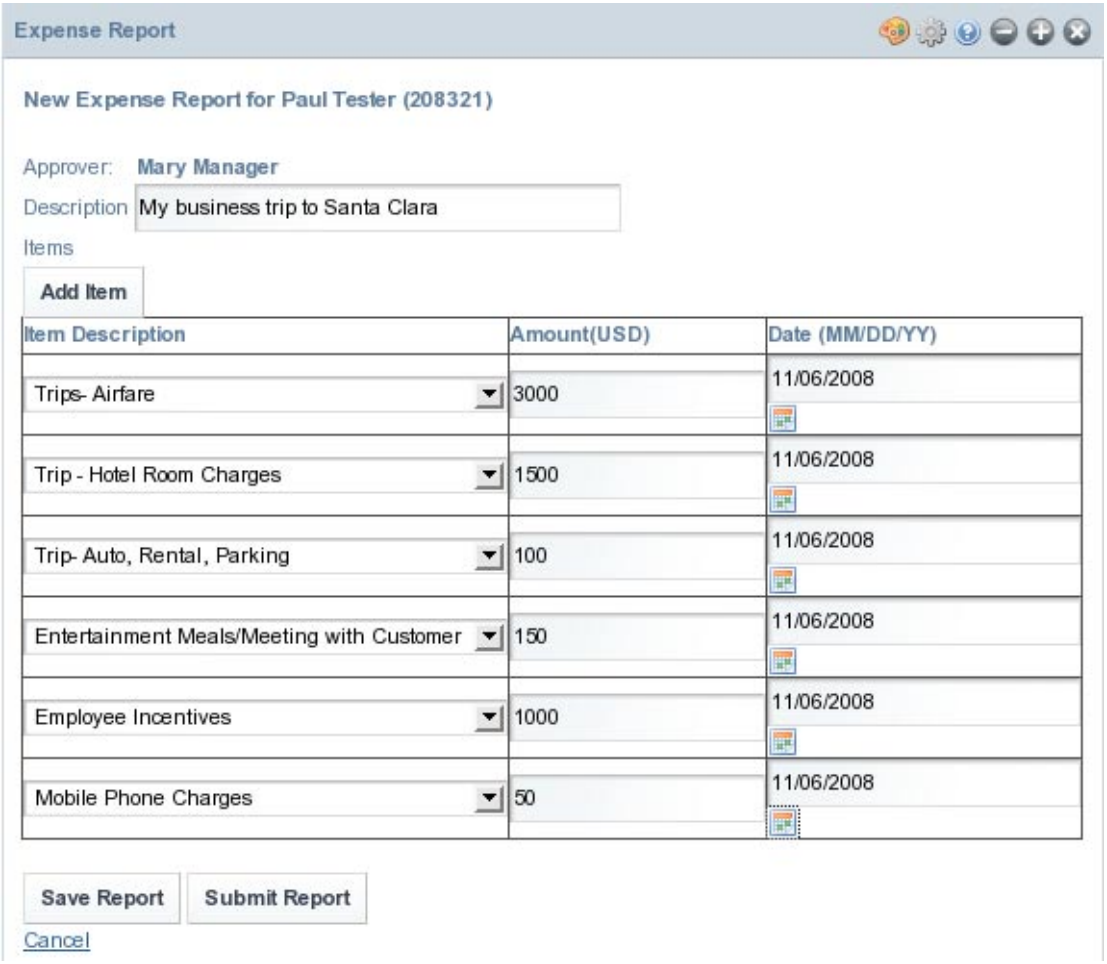

FIGURE 4–1 To Submit an Expense Report

4 **Click Save Report.**

5 **Click the Go back to Report Summary link to view the report summary.**

The summary page displays the Report No., Description, Submission Date, Amount, and the Status.

FIGURE 4–2 To Submit an Expense Report

6 Click the number under Report No.

The report is enabled for submission.

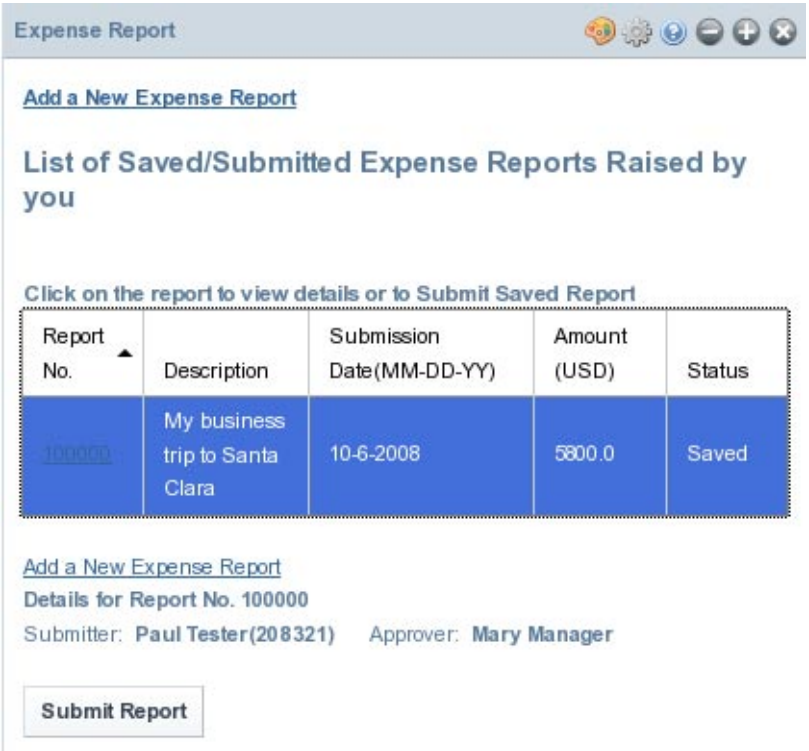

FIGURE 4–3 To Submit an Expense Report

7 **Click Submit Report.**

The report is submitted for approval. The Status of the report changes to Pending.

FIGURE 4–4 To Submit an Expense Report

▼ To Approve an Expense Report

1 **Log in to Web Space Server as Mary Manager.**

The report submitted by Paul is displayed under the List/History of Expense Reports Raised by Reportees section in the Expense Report portlet.

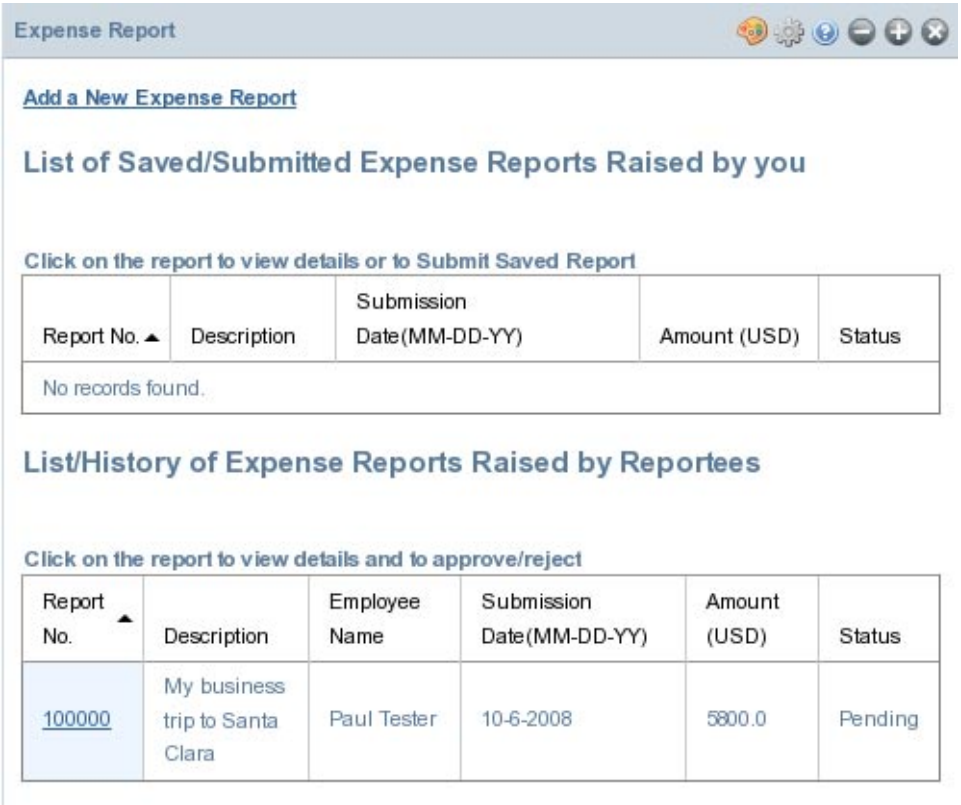

FIGURE 4–5 To Approve an Expense Report

2 **Click the report ID.**

Details of the submitter are displayed. Also, the Approve Report and Reject Report buttons become active.

FIGURE 4–6 To Approve an Expense Report

3 Click the Approve Report button to approve the report.

Working With Communities and Organizations

The following topics describe some of the tasks that you can perform on Communities and Organizations in Web Space Server.

- "Adding Public and Private Pages to Communities and Organizations" on page 78
- "Enabling Crawling of Page URLs by Search Engines" on page 79

Adding Public and Private Pages to Communities and Organizations

The following procedure explains how you can add a public page and a private page to an Organization. You can add public page and private pages to a Community by following the similar procedure.

For the procedure to create an Organization, see "To Create an Organization" on page 106.

▼ To Add a Public Page and a Private Page to an Organization

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Organizations from the Welcome menu.**
   All existing Organizations are listed.
3. **To add a page, click the Actions button corresponding to an Organization and choose Manage Pages from the menu.**
   For example, you can add pages to an Organization called Test Organization.
4. **To add a public page, click the Public Pages tab and type a name and type for the page.**
   For example, you can create a public page named Public with the type portlet.
5. **Click the Add Page button.**
   The page is added to the Organization.

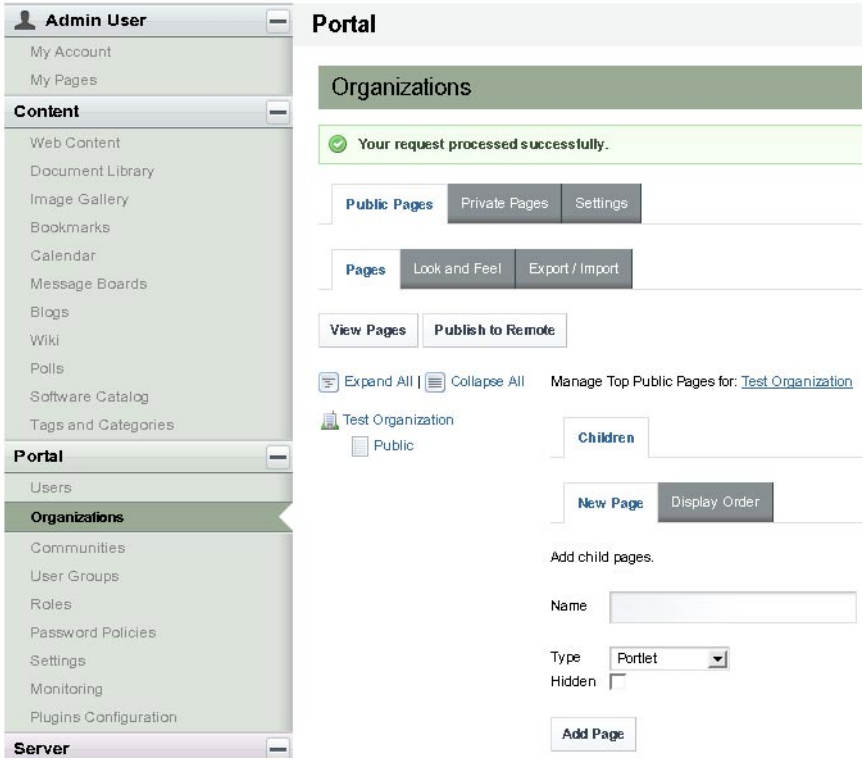

FIGURE 4–7 Adding a Public Page

6 **To add a private page, click the Private Pages tab and type a name and type for the page.**

For example, you can create a private page named Private with the type portlet.

7 **Click the Add Page button.**

The page is added to the Organization.

8 **To change the display order for pages, click the Display Order tab.**

Enabling Crawling of Page URLs by Search Engines

You can enable crawling of a page URL by a search engine for the pages on Communities and Organizations.

▼ To Enable Crawling of Page URLs by Search Engines

This procedure describes how to enable the crawling of a page URL on the CMS Community. You can enable crawling for the pages on any other Community or Organization.

1. **Log in to Sun GlassFish Web Space Server as the admin user.**
2. **Choose Add Application from the Welcome menu, and add the My Communities portlet to your page.**
3. **Click the Communities I Own tab on the My Communities portlet.**
4. **Click the Actions button corresponding to the CMS community and choose Manage Pages from the menu.**
5. **Navigate to Settings → Sitemap.**
6. **Click the desired server engine link.**

   Clicking the Google or Yahoo link, adds your sitemap to the sitemaps to crawl on that search engine
7. **Click the preview link to view the XML file that is sent to the webmaster at the selected search engine.**

Virtual Hosting of Portal Pages

Web Space Server supports virtual hosting of Communities and Organizations. Public and Private pages in a Community or an Organization have a unique common friendly URL. You have to provide separate host names for public and private pages for virtual hosting of public and private pages on separate machines.

▼ To Virtual Host a Page on a Community

1. **Log in to Sun GlassFish Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Communities from the Welcome menu.**

   All existing Communities are listed.
3. **Click the Actions button corresponding to a selected Community and choose Manage Pages from the menu.**

   In this example, click the actions button corresponding to the Guest community.

4. **Click the Settings tab.**

5. **Click the Virtual Host tab.**

6. **Specify a Friendly URL.**

   In this example, `guest` is the default friendly URL. You can change it to something else, say `friendly-guest`.

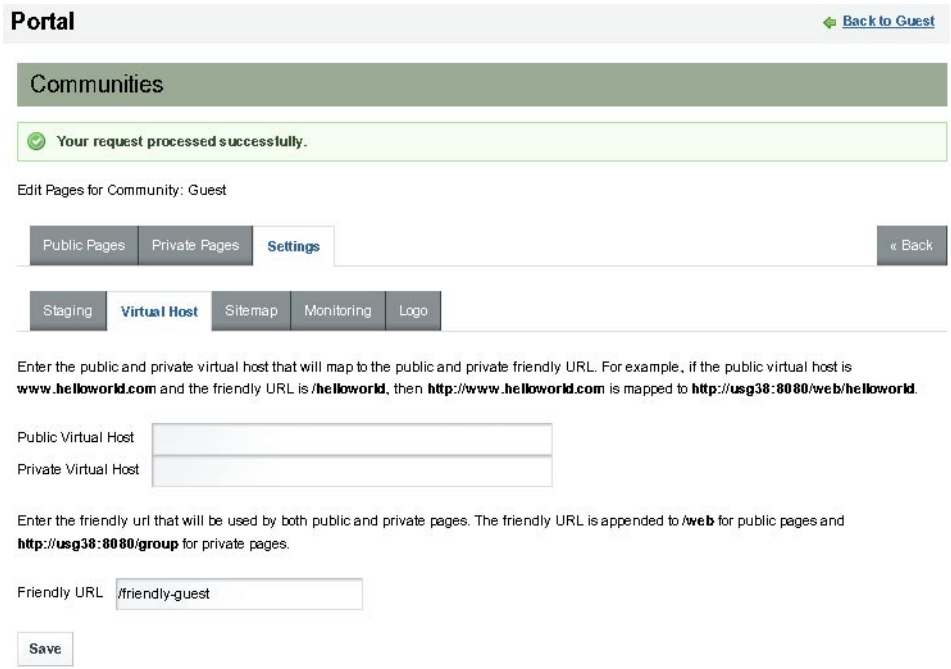
Portal
Back to Guest
Communities
Your request processed successfully.
Edit Pages for Community: Guest
Public Pages
Private Pages
Settings
« Back
Staging
Virtual Host
Sitemap
Monitoring
Logo
Enter the public and private virtual host that will map to the public and private friendly URL. For example, if the public virtual host is www.helloworld.com and the friendly URL is /helloworld, then http://www.helloworld.com is mapped to http://usg38:8080/web/helloworld.
Public Virtual Host
Private Virtual Host
Enter the friendly url that will be used by both public and private pages. The friendly URL is appended to /web for public pages and http://usg38:8080/group for private pages.
Friendly URL
/friendly-guest
Save

FIGURE 4–8 Virtual Hosting Using the Friendly URL

7. **Click Save.**

8. **To view the public page, click the Public Pages tab.**

9. **Click the View Pages button.**

   The public page for the Community opens in a separate browser with its virtual hosting URL. Similarly, you can view the virtually hosted private pages of the Community.

Using the Mail Portlet

Use the Mail portlet to configure your email account on Sun GlassFish Web Space Server.

▼ To Install the Mail Portlet

1. **Choose Control Panel → Server → Plugin Installations.**
2. **Click Install More Portlets under Portlet Plugins tab.**
3. **Type mail as the search keyword and click Search Plugins.**
4. **Select the portlet link, and click Install to install the portlet.**

▼ To Configure Email Accounts

This procedure describes how to configure an email account and also illustrates the steps to add an IMAP Gmail account..

1. **Log in to Web Space Server as the admin user.**
2. **Choose Add Applications from the Welcome menu and add the Mail portlet to your page.**
3. **Click the Configure Email Accounts link.**
   You are prompted to add mail accounts.

   In order to add a Gmail account, you must first enable IMAP for the account.

   a. **Sign in to Gmail.**
   b. **Click Settings at the top of any Gmail page.**
   c. **Click the Forwarding and POP/IMAP category.**
   d. **Select the Enable IMAP option.**
   e. **Click Save Changes.**
4. **Click Add a Gmail Account.**
5. **Type your Gmail user name and password and click Save.**
   Your email account is added.

6. **Click the Check Your Email link.**

   You can read the mails and folders in your Gmail account and can compose new messages.

Exporting and Importing of Portal Data

You can back up a portlet, Community, or Organization by exporting their data to the disk. When you upgrade the Web Space Server installation on your machine, or when you reinstall Web Space Server due to some other reason, you can import the data back to your portlet.

▼ To Export and Import Data of a Portlet

This procedure uses an example of exporting a Calendar portlet event.

1. **Log in to Sun GlassFish Web Space Server as the admin user.**

2. **Click Add Application from the Welcome menu and add a portlet to your page.**

   In this example, add the Calendar portlet.

3. **Click the Add Event button.**

   In this example, add a weekly event called Project Meeting. You can modify permissions for the guest user by clicking the Permissions link.

4. **Click Save.**

5. **Click the Export/Import button from the menu controls for the portlet.**

6. **Click Export and save the file to the disk.**

   A `.lar` file is exported to your disk. The file includes the event description.

7. **To import the event information, import the file to the Calendar portlet of a Web Space Server installation.**

▼ To Export and Import Data from a Community or Organization

You can export the data residing on a Community or an Organization. When you import the data to a Community or Organization on another Web Space Server installation, all pages related to the Community or Organization are imported.

1. **Log in to Sun GlassFish Web Space Server as the admin user.**

2 **Navigate to a page on a Community or an Organization.**

3 **Choose Manage Pages from the Welcome menu.**

4 **Click the Export/Import tab.**

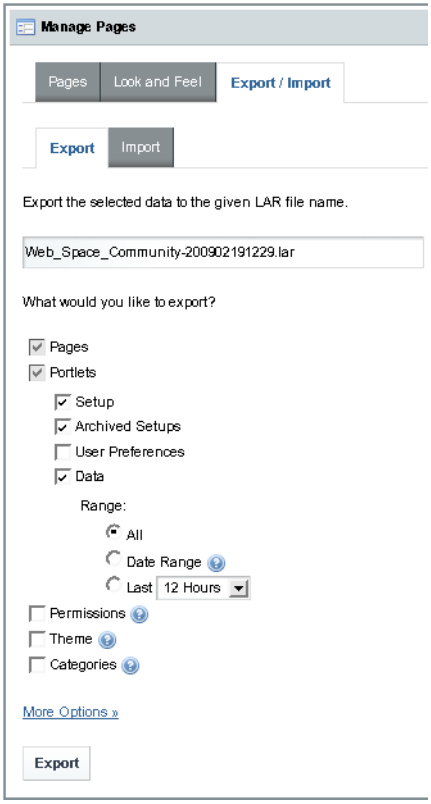

FIGURE 4–9 Exporting a Page

The `.lar` file that gets exported uses the naming convention *Community/Organization-name-unique-#id.*`.lar`

The default export includes all the options that are initially selected. At the minimum, all pages and all portlets are exported. The options are:

- Pages - All private and public pages associated with the Community or the Organization.
- Portlets - All portlets on Community or Organization pages.
- Setup - The current setup information of the portlets.

- Archived Setup - Archived setup information of the portlets.
- User preferences - User preferences such as Look and Feel and language attributes applied to portlets.
- Data - The data reside inside portlets. The default Range for Data is All. You can specify a Date Range for Data. When a Date Range is specified, only the data pertaining to the date range is exported.
- Permissions, Theme, and Categories options - You can export Permissions, Theme, and Categories associated with pages and portlets. For more information, click the help button.

Note – When you import, you need to select the same options that were selected while exporting.

5 **Click Export.**

Enabling Sharing of a Portlet

You can enable sharing of a portlet on any web site, on Facebook, and by Friends.

- "To Share a Portlet With Other Web sites" on page 85
- "To Share a Portlet With Facebook" on page 88
- "To Allow Sharing of a Portlet With Friends" on page 88

▼ To Share a Portlet With Other Web sites

Consider the example of sharing the Calendar portlet on a web site created by you. This procedure assumes that you have already added Calendar portlet to your page.

1 **Log in to Sun GlassFish Web Space Server.**

2 **Click the Configuration button among the edit controls for the portlet.**

In this example, click the Configuration button among the edit controls for the Calendar portlet.

3 **Click the Sharing tab.**

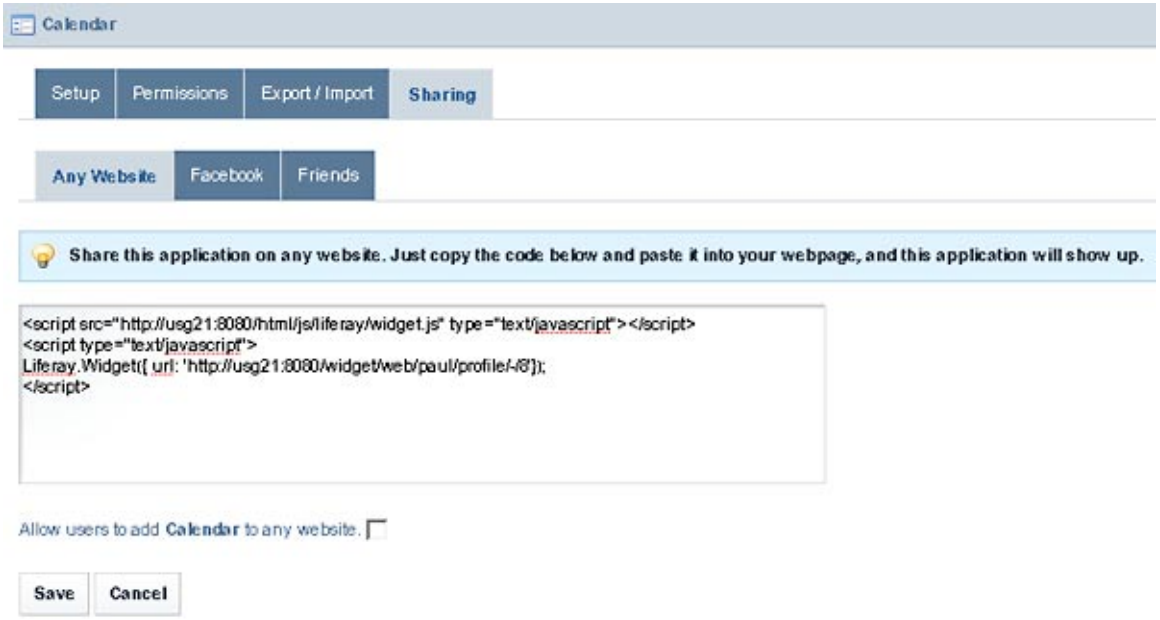

FIGURE 4–10 The Code for Sharing the Portlet on Any Web site

4. **Select and copy the code for sharing the portlet on any web site.**
5. **Select the Allow Users to add *Calendar* to Any Web site option.**
6. **Click Save.**
7. **Open the source code of any web site and copy the sharing code into it, then save changes to add the portlet to the web site.**

   For example:

   a. **Open the Mozilla Classic browser**
   b. **Choose Edit Page from the File menu.**
   c. **Click HTML Source.**
   d. **Paste the copied code into the page.**

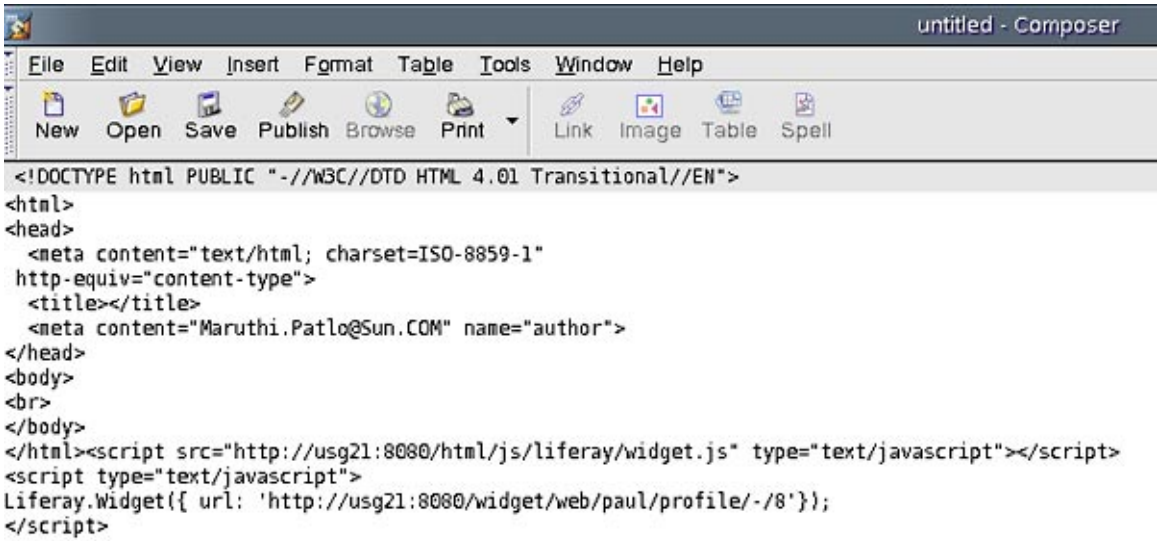

FIGURE 4–11 Adding the Sharing Code to the Source code of a Web site

e. Click Save.

f. In the dialog box that appears, type a title and click OK.

g. Save the page on your desktop.

In this example, you can name the page as `Calendar Sharing`.

h. Open the page in a web browser.

Note that the Calendar portlet is added to the page.

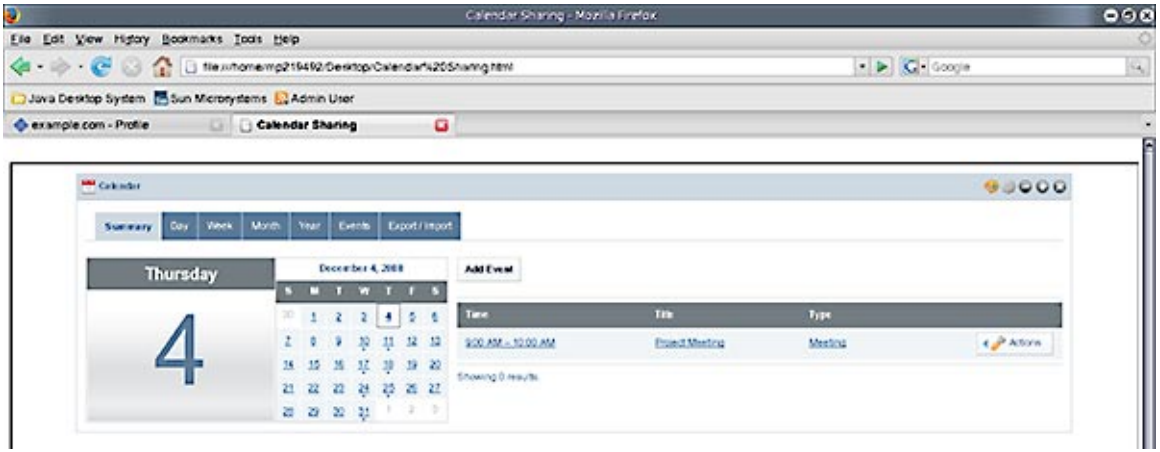

FIGURE 4–12 The Portlet Added to the Web site

▼ To Share a Portlet With Facebook

This procedure assumes that you have already added the Calendar portlet to your page.

1. **Log in to Sun GlassFish Web Space Server.**
2. **Click the Configuration button among the edit controls for the portlet.**
   In this example, click the Configuration button among the edit controls for the Calendar portlet.
3. **Click the Sharing tab.**
4. **Click Facebook under Sharing.**
5. **Click Get the API Key and Canvas Page URL from Facebook link and follow the instructions to get the API key and canvas page URL from Facebook.**
6. **Type the API key and the canvas page URL and click Save.**
7. **Access the portlet on Facebook by using the canvas page URL.**

▼ To Allow Sharing of a Portlet With Friends

The Friends portlet lists the Web Space Server users who are registered as your friends. You can authorize your friends to access a portlet that is on your page.

1. **Log in to Sun GlassFish Web Space Server.**

2. **Click the Configuration button among the edit controls for a portlet.**
3. **Click the Sharing tab.**
4. **Click Friends under Sharing.**
5. **Select the Allow Users to Share *portlet* With Friends option and click Save.**

Using Document Library Plugins on OpenOffice

Document Library Plugins are helpful to establish an interface with Web Space Server from OpenOffice. Document Library Plugins are shipped along with the standard product. When you install the plugins on OpenOffice, you will be able to interface with the CMS feature of Web Space Server. This feature enables you to use OpenOffice to edit the documents you have in the Document Library. Also, you can add documents to the Document Library.

Note – You can download OpenOffice freely from `http://www.openoffice.org/`.

▼ To Store a Document to CMS

1. **Open OpenOffice – Writer.**
2. **Choose Tools → Extension Manager.**
3. **Click the Add button and navigate to ShareSpaceDocumentLibraryPlugin.oxt.**

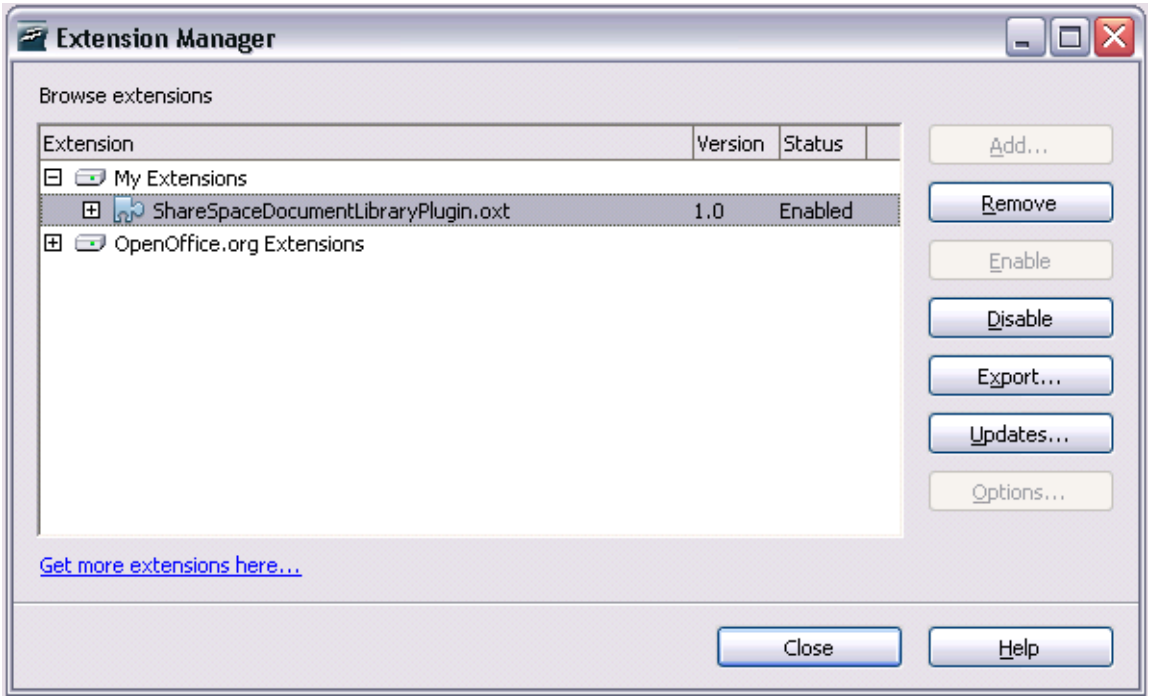

FIGURE 4–13 Installing the Document Library Plugins

The Document Library plugins are added to your page. The Load Document from CMS and Store Document to CMS buttons are added to the toolbar.

4 **Type some content that you want to store on the CMS.**

5 **Click the Store Document to CMS button to upload the document to CMS.**

Using the Widget Consumer Portlet

You can embed a web widget by copying a JavaScript™ or flash code snippet and pasting it in the text box after clicking the Configuration button on the Widget Consumer portlet. On saving the changes to the configuration, you will be able to view the web widget from the portlet.

Widget Consumer portlet is an instanceable portlet. You can add any number of instances of the portlet to your page with each portlet instance embedding a separate widget. For example, YouTube links provide a code snippet named Embed at the right top corner. You can copy and paste this code to the Widget Consumer portlet to view the YouTube link.

▼ To Configure the Widget Consumer Portlet

This procedure describes how to copy the code snippet for a web widget from the web site `cricinfo.com` and use it on the Widget Consumer portlet.

1. **Log in to Sun GlassFish Web Space Server as the admin user.**
2. **Choose Add Application from the Welcome menu and add the Widget Consumer portlet to your page.**
3. **Copy the code snippet to embed a web widget.**

   In this example, copy the code snippet to embed a web widget from the site `cricinfo.com`.

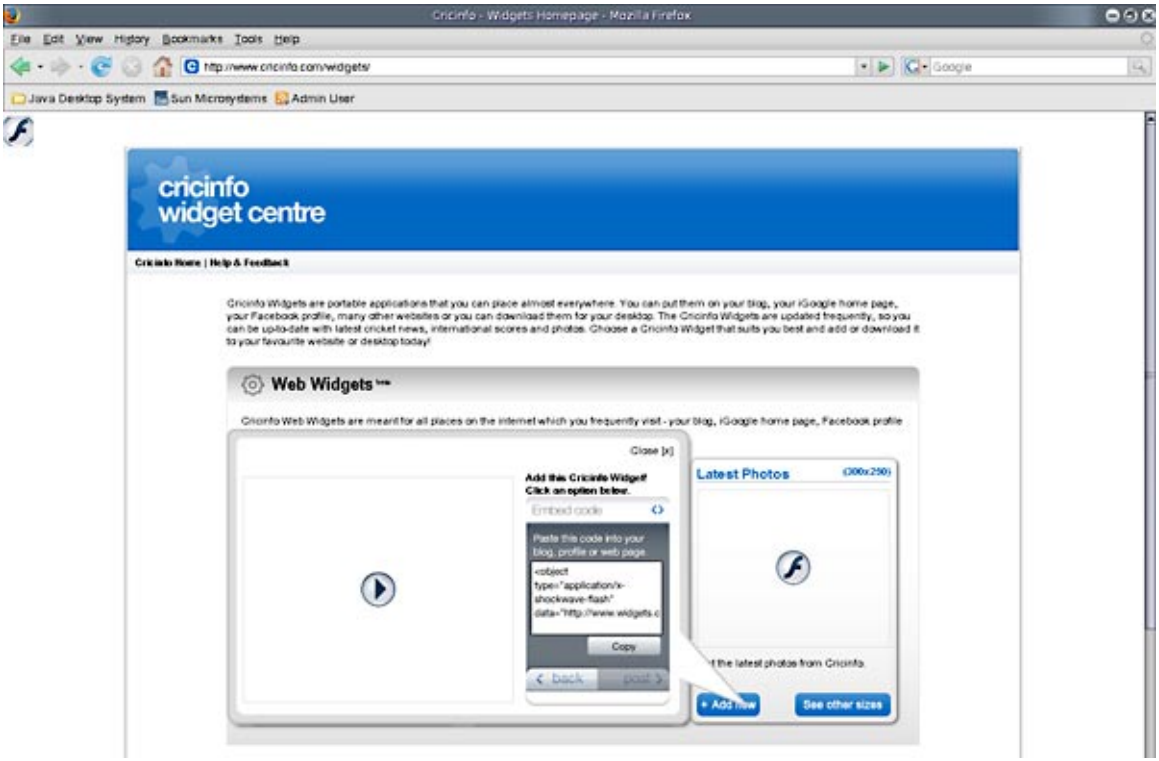
Cricinfo - Widgets Homepage - Mozilla Firefox
File Edit View History Bookmarks Tools Help
http://www.cricinfo.com/widgets/
Java Desktop System
Sun Microsystems
Admin User
cricinfo
widget centre
Cricinfo Home | Help & Feedback
Cricinfo Widgets are portable applications that you can place almost everywhere. You can put them on your blog, your iGoogle home page, your Facebook profile, many other websites or you can download them for your desktop. The Cricinfo Widgets are updated frequently, so you can be up-to-date with latest cricket news, international scores and photos. Choose a Cricinfo Widget that suits you best and add or download it to your favourite website or desktop today!
Web Widgets
Cricinfo Web Widgets are meant for all places on the internet which you frequently visit - your blog, iGoogle home page, Facebook profile
Close [x]
Add this Cricinfo Widget
Click an option below.
Embed code
Paste this code into your blog, profile or web page
Copy
Latest Photos
(300x250)
+ Add new
See other sizes

FIGURE 4–14 Copying the Code Snippet to Embed a Widget

4. **Click the Configuration button on the portlet.**
5. **Paste the widget code into the text box.**

6 **Click Save.**

You can view the widget from the Widget Consumer portlet.

Workflow Portlet

Admin users can define a workflow and upload the workflow definition file through the Workflow Portlet UI. They can also initiate a workflow instance. To create a workflow, you need a workflow definition file that contains workflow definition.

The following topics explains how to create and configure a workflow:

- "Creating a Workflow" on page 92
- "Configuring Workflow for MySQL" on page 98

Creating a Workflow

To create a workflow, you need to create a workflow definition file in XML format that conforms to the jBPM Process Definition Language (JPDL) standard.

For example, say that you are creating a workflow for a leave application and approval process.

The following is the scenario involved:

1. The admin user creates a workflow definition called LeaveApproval.
2. The admin user creates a workflow instance (Workflow State 1).
3. The test user uses the workflow instance to apply for leave (Workflow State 2).
4. The manager receives the holiday request. The manager can approve or reject the request, or can send the request for reconsideration (Workflow State 2).
5. The test user can verify to see whether the process has ended.

The following procedures provide the detailed process steps:

1. "To Add a Workflow Definition" on page 92
2. "To Create a Workflow Instance" on page 95
3. "Workflow Process Steps: To Request an Holiday" on page 96
4. "Workflow Process Steps: To Evaluate Holiday Request" on page 97
5. "Workflow Process Steps: To Ascertain the Request Status" on page 97

▼ To Add a Workflow Definition

1 **Log in to Web Space Server as the admin user.**

2 **Create a new page by clicking Add Page.**

3. **Type a name for the page and click Save.**

   For example, name it Workflow.

4. **Click the tab for the page.**

   The page opens.

5. **Choose Add Applications from the Welcome menu, and add the Workflow portlet to the page.**

6. **Click the Add Definition button.**

7. **Add the workflow definition in XML format and click the Save New Version button.**

   You can copy and paste a workflow definition. In this example, LeaveApproval version 1.0 is the name of the workflow definition.

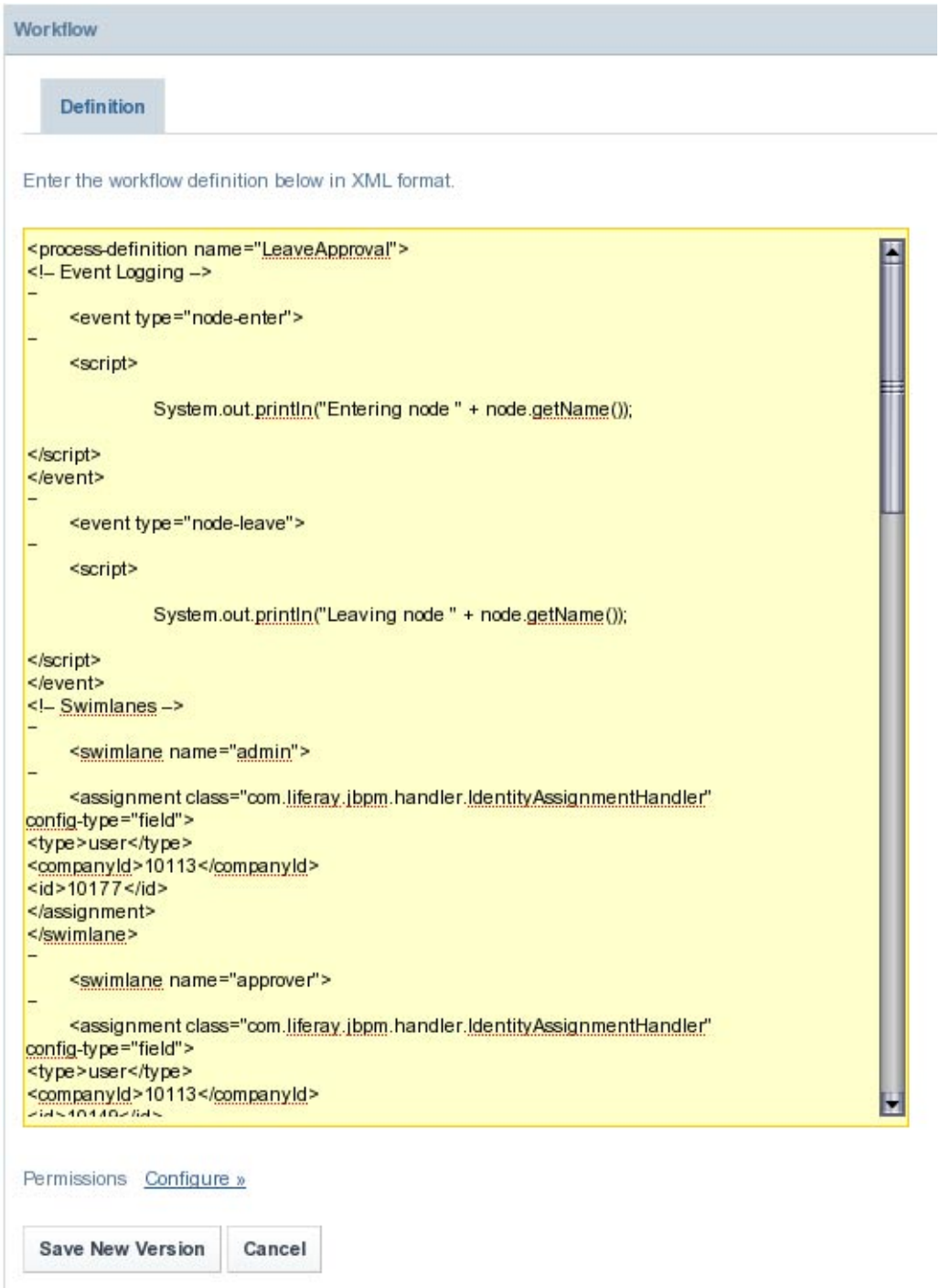

FIGURE 4–15 Adding a Workflow Definition

A workflow is created with a version number associated with it.

8 **Log out and log in back in to Web Space Server for the changes to take effect.**

▼ To Create a Workflow Instance

1 **Log in to Web Space Server as the admin user.**

2 **Choose Add Applications from the Welcome menu, and add the Workflow portlet to the page.**

3 **Click Search Definitions on the Workflow portlet to view all workflow definitions.**

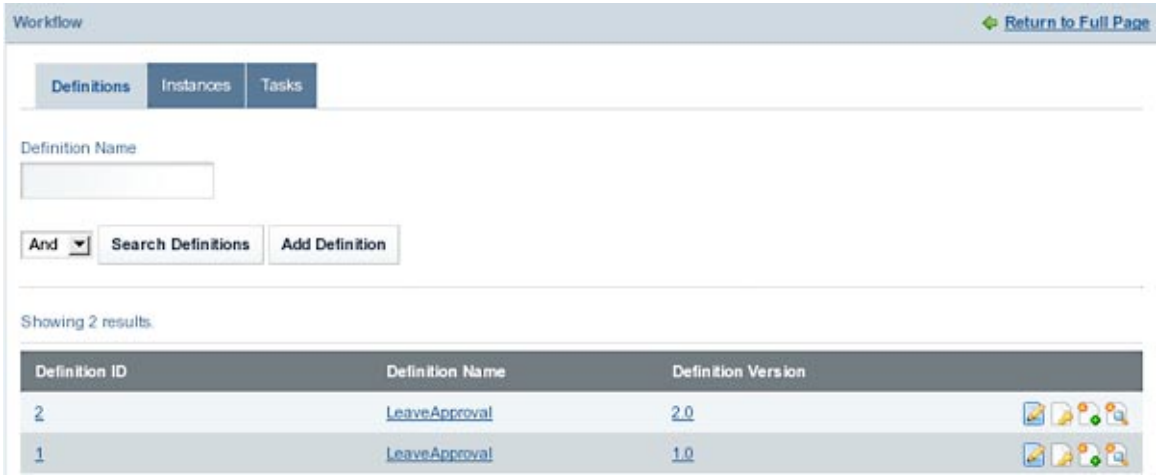

FIGURE 4–16 Creating a Workflow Instance

4 **Click the Add Instances button next to a workflow definition.**

In this example, you can create an instance for version 1.0 of the LeaveApproval workflow definition.

An instance is created for the Workflow Definition. Provide values for the fields such as the Definition Name, Definition Version, Start Date (Range), and End Date (Range), and click Search to search for the instance. To hide the instances that have already ended, select the Hide the instances that have already ended checkbox.

You can create any number of instances for a version of Workflow Definition.

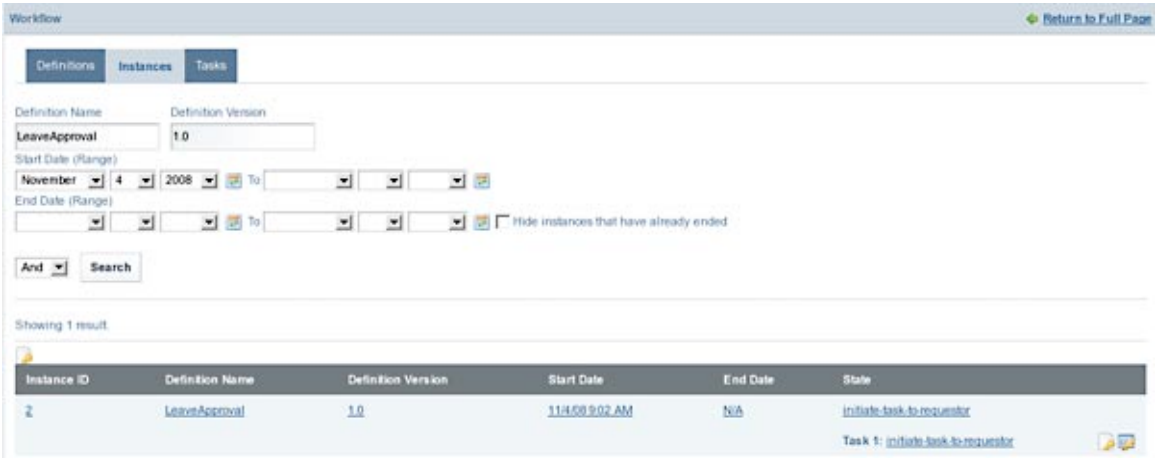

FIGURE 4–17 Adding Workflow Instances

5 **Click the Manage button for the instance.**

6 **Click Save to save the task.**

The task will be assigned to a requester.

Note – If the admin user clicks the Signal button next to an Instance, the instance is promoted to the next state of workflow. The requester is not allowed to use an instance which is promoted to the next state of the workflow.

Accessing a Workflow Instance

Accessing a workflow instance follows the series of steps necessary to complete the workflow cycle for the instance.

▼ Workflow Process Steps: To Request an Holiday

1 **Log in to Web Space Server as Paul, the test user.**

2 **Click the Tasks tab on the Workflow portlet.**

You can use the Task Name, Definition Name, Current Date, Start Date, and End Date fields to search for a task. To hide the instances that have already ended, select the Hide the instances that have already ended checkbox.

3 **Click a Task for an Instance which have not ended.**

In this example, click the Holiday Request task for an Instance. Select a start date and an end date.

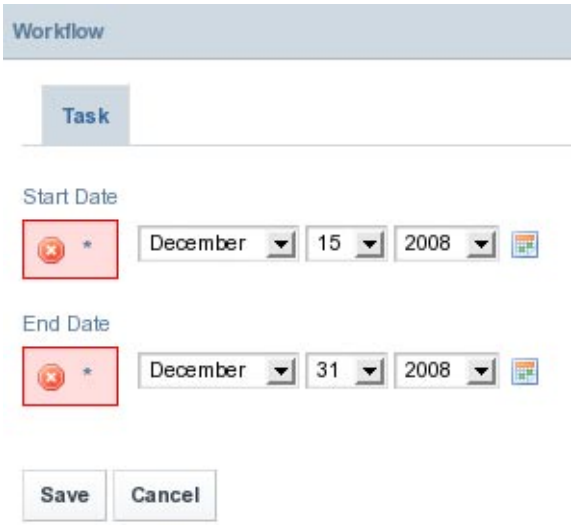

FIGURE 4–18 Workflow Process Steps: To Request an Holiday

4 **Click Save.**

▼ Workflow Process Steps: To Evaluate Holiday Request

1 **Log in to Sun GlassFish Web Space Server as Mary Manager.**

2 **Click the Tasks tab on the Workflow portlet.**

3 **Click a Task for an Instance which have not ended.**

In this example, click the Evaluate Holiday Request task for an Instance.

The manager can place comments against the request. The manager can exercise Approve, Reject, and Send Back for Review options.

The Instance ends on clicking the Approve or Reject button.

▼ Workflow Process Steps: To Ascertain the Request Status

1 **Log in to Sun GlassFish Web Space Server as Paul, the test user.**

2 **Click the Tasks tab on the Workflow portlet.**

The End Date field next to the task name has the date and time of approval on it.

Configuring Workflow for MySQL

You need to make some configuration changes, if you have installed Sun GlassFish Web Space Server on MySQL database. If you are installing the Web Space Server evaluation bundle, no changes are required, as the workflow is configured for HSQL by default.

▼ To Configure Workflow for MySQL

1. **Copy the** `saw-impl-jbpm.jar` **file from** <*Web Space Server install dir*>`\glassfish2\domains\domain1\applications\j2ee-modules\saw-web\WEB-INF\lib`**.**

2. **Paste the** `saw-impl-jbpm.jar` **file to a** `temp` **folder.**

3. **Extract the** `saw-impl-jbpm.jar` **file.**

   ```
   unjar saw-impl-jbpm.jar
   ```

4. **Remove the commenting for the following section in the** `hibernate-cfg.xml` **file and change the appropriate values to point to the MySQL database.**

```
<!-- JDBC connection properties (begin) -->
    <property name="hibernate.connection.driver_class">com.mysql.jdbc.Driver</property>
    <property name="hibernate.connection.url">jdbc:mysql://localhost:3306/lportal</property>
    <property name="hibernate.connection.username">lportal</property>
    <property name="hibernate.connection.password">lportal</property>
    <!-- JDBC connection properties (end) -->
```

5. `jar` **the** `saw-impl-jbpm.jar` **file again.**

6. **Create a directory structure** `sources/saw-web-5.2.0.1/WEB-INF/lib/` **under** <*root-dir*>`/webspace-for-gfv2/var/webspace/war-workspace`**, and paste the** `saw-impl-jbpm.jar` **file into it.**

7. **Change directory to** <*root-dir*>`/webspace-for-gfv2/var/webspace/war-workspace`**.**

   ```
   cd <root-dir>/webspace-for-gfv2/var/webspace/war-workspace
   ```

8. **Run** `ant -f synchronize.xml` **for** `saw-web-5.2.0.1`**.**

9. **Restart GlassFish server.**

Tagging in Web Space Server

The tagging system in Web Space Server helps to group blogs, wikis, and articles. Admin user can create tag sets and tags, and can define permissions to use tags by using the Tags and Categories portlet. Tags follows a kind of taxonomy and classification, as the admin user can define tag sets and tags within them. Users will have the freedom to create their own tags or to use the existing tags.

The basic process of using the tagging system is:

- The admin user creates tags and tag sets, and defines permissions for usage.
- The user applies tags for his blogs, wikis, or articles. The users can select the tags that they want to apply, or can define their own tags.
- Any content that is tagged is grouped or aggregated.

◆ ◆ ◆ CHAPTER 5

Roles and Permissions

The admin user administers roles and permissions for the resources that needs to be managed to build a site. This chapter covers the following topics:

- Administering Roles and Permissions
- "Definition and Classification of Portal Resources" on page 102
- User Groups
- Communities
- Organizations
- Users and User Roles
- Plugins

Administering Roles and Permissions

Use the Control Panel to set roles and permissions for users, user groups, communities, and organizations.

Using the Control Panel to Administer Roles and Permissions

The Control Panel provides an interface for creating and maintaining the following:

- Users
- Organizations
- User Groups
- Roles

Additionally, you can configure many server settings, including:

- Information about the site
- Authentication options, including Single Sign-On and LDAP integration

- Default user associations
- Reserved screen names
- Mail host names
- Email notifications

Use the Control Panel to create the portal structure, implement security, and administer users.

▼ To use the Control Panel to Administer Roles and Permissions

1. **Log in to Sun GlassFish Web Space Server as the admin user.**
2. **Choose Control Panel from the Welcome menu.**

   The Control Panel page appears.
3. **To view and make changes to an item, choose an item from the left menu.**

   For example, click **Users** under **Portal**. From this page, you can set roles and permissions for users. Similarly, you can set roles and permissions for **Organizations**, **Communities**, and **User Groups**.

Definition and Classification of Portal Resources

Web Space Server organizes portals and user resources as follows:

1. Portals are accessed by Users.
2. Users can be collected into User Groups.
3. Users can belong to Organizations.
4. Organizations can be grouped into hierarchies.
5. Users, Groups, and Organizations can belong to Communities that have a common interest.

The simplest way to think about this is that you have users and various ways those users can be grouped together. Some of these groupings follow an administratively organized hierarchy, and other groupings might be done by the users themselves, such as different users from multiple organizations that have a common interest in dogs, starting a community called Dog Lovers. Other groupings can be done administratively through user groups or roles for other functions that might apply throughout the portal, such as a Message Board Administrators group made up of users from multiple communities and organizations who can administer any message board in the portal.

This way of organizing portal concepts is shown in the following figure.

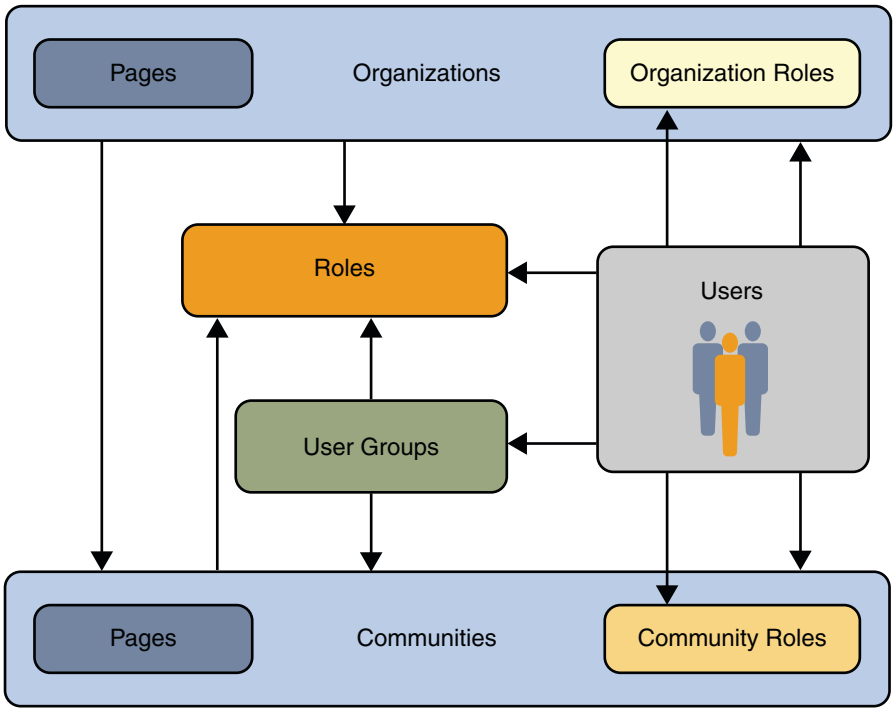

FIGURE 5–1 Sun GlassFish Web Space Server Portal Resources

In the figure, each arrow may be read as "can be a member of". This means that Organizations can be members of Communities, Communities can be members of Roles, Users can be members of anything, and so on. This flexibility provides a powerful mechanism for portal administrators to configure portal resources and security.

User Groups

User groups are arbitrary groupings of users. These groups are created by portal administrators to group users who do not have an obvious organizational or community-based attribute or aspect that brings them together. Groups can have permissions, much like roles. You could therefore use a user froup to grant permissions to any arbitrary list of users.

For example, You could create a user group called "People Who Have Access to My Stuff" and grant permission to that user group to access a particular Document Library folder . This list of users could be members of separate Organizations, Communities, or Roleswhom you want to also have access to this Document Library folder. The folder could be some personal, community, or organization page that is accessible to them in the portal.

▼ To Create a User Group

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → User Groups from the Welcome menu.**
3. **Click Add.**
4. **Specify a name and a description for the user group and click Save.**

▼ To Assign Users to User Groups

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → User Groups from the Welcome menu.**
3. **Click the Actions button corresponding to a user group and choose Assign Members from the menu.**

   The assign members page enables you to make assignments to the user group.
4. **Click the Available tab to view the list of all available members.**
5. **Select the users you want to add to the user group and click Update Associations.**
6. **Click the Current tab to verify updated associations to the user group.**

Communities

Communities are collections of users who have a common interest. Web Space Server's default pages are in the Guest community, because everyone, whether they are anonymous or members of the portal, has common interest in the default public pages of your site.

The three types of Communities:

- Open
- Restricted
- Private

An Open Community (the default) allows portal users to join and leave the Community whenever they want to, provided they have access to a Communities portlet. A Restricted

Community requires that users be added to the Community by a community administrator. Users may use the Communities portlet to request membership. A Private community does not allow users to join and to leave the community.

To add a Community

You can add communities by navigating to Control Panel → Portal → Communities or by using the My Communities portlet.

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Communities from the Welcome menu.**
3. **Click Add.**
4. **Specify the name and a description for the community.**
5. **Specify the type and active attributes for the community.**
   A community can be Open, Restricted, or Private, with Open being the default type. By default, the community is Active.
6. **Click Save.**

To Assign Users to a Community

You can assign members to communities by navigating to Control Panel → Portal → Communities or by using the My Communities portlet.

1. **Log in to Web Space Server as the admin user.**
2. **Click Add Applications from the Welcome menu.**
3. **Expand the Community folder.**
4. **Click Add next to the My Communities portlet.**
5. **Click Available Communities to list all available communities.**
6. **Click the Actions button for the community, and choose Assign Members from the menu.**
   All the current Users, Organizations, and User Groups are listed in their respective tabs.
7. **Click the Available tab under Users tab to list all available users.**

8. **Select each of the users whom you want to assign as members.**
9. **Click the Update Associations button to assign selected users as members.**
10. **Click the Current tab to view the current members, which include the members you just assigned to the community.**

Organizations

Organizations are hierarchical collections of Users. They are one of the two types of portal resources that can have pages. A special type of Organization called Location defines where users are specifically located.

The two kinds of Organizations are:

- Regular - Can have suborganizations
- Location - Is not allowed to have suborganizations.

Let us consider the example of creating an organization called Admin Organization and a Suborganization called Admin Location. This section explains the method of defining an organization and creating users under organization.

▼ To Create an Organization

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Organizations from the Welcome menu.**
   All the existing organizations are listed.
3. **Click Add.**
4. **Provide a name and type for the organization.**
   For an organization of type Location, also specify the Country and Region.
5. **Click Save.**
   You can specify other attributes such as, address, phone number, email ID, and web site.

To Create a Suborganization

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Organizations from the Welcome menu.**
   All the existing organizations are listed.
3. **Click Add.**
4. **Provide a name and type for the organization.**
   For an organization of type Location, also specify the Country and Region.
5. **Click Select to select a parent organization.**
   The window that appears lists all the Organizations of type Regular.

   Note – You cannot create a Location Organization without assigning a parent Organization to it.
6. **Select an organization to as the parent organization.**
   The Organization being created becomes the suborganization of the parent Organization.
7. **Click Save.**

   Note – An alternative method for selecting a parent organization for an organization is by clicking the Actions button corresponding to an organization and choosing Add Regular Organization or Add Location from the menu. To select a Regular Organization as the parent organization, choose Add Regular Organization from the menu. If you want to select an organization of type Location as the parent organization, choose Add Location from the menu.

To Create Users under an Organization

Users can have "member of" association with an organization.

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Organizations from the Welcome menu.**
   All the existing organizations are listed.
3. **Click Actions button corresponding to an organization.**
4. **Choose Add User from the menu.**

5 **Type the name and other details for the user.**

By default, the user is assigned to the same organization. To change the organization for the user, or to assign the user to more organizations, click the Organizations link under User Information.

- **Click Select to select another organization for the user.**
- **Click Remove corresponding to an organization to remove user from the organization.**

6 **Click Save.**

The user is created.

7 **Update the User Information, Identification, and other details of the organization.**

8 **Click Save.**

Users and User Roles

The three kinds of User Roles are:

- Regular
- Organization
- Community

To view user roles, navigate to Control Panel → Portal → Users from the Welcome menu, click the link for any user, and choose Roles under User Information.

Regular Roles

Guest, User, Power User, Owner, and Administrator are the different Regular roles. All the user with login access to Web Space Server are assigned the User role. This role differentiates between a Guest and a person who has a user ID in the portal. By default, all users are also assigned the Power User role. This role by default gives users their own personal pages (both public and private) where they can place portlets.

Organization Roles

You can assign Organization Administrator, Organization Member, and Organization Owner roles to users who are members of a organization.

Community Roles

You can assign Community Administrator, Community Member, Community Owner, Content Designer, Content Editor, and Content Publisher roles to users who are members of a community.

▼ To Define User Roles

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Portal → Users from the Welcome menu.**
3. **Select a user from the list.**

   Use the Regular Role, Community Roles, and Organization Roles tabs to assign Regular, Community, and Organization roles to the users.
4. **Choose Roles under User Information.**

   You can assign Regular roles for all users in addition to the default Regular roles. To be eligible for Organization or Community roles, the user need to be a member of a Web Space Server Organization or Community. You can also remove the roles assigned to a user here.
5. **Choose Select under Regular Roles, Organization Roles, or Community Roles to assign more Regular, Organization, or Community roles respectively.**
6. **To remove an assigned role select Remove corresponding to the role.**
7. **Click Save.**

Plugins

Plugins help in extending the functionality of an application. You can activate or deactivate plugins. You can also extend or restrict the accessibility of a plugin to different users by adding or removing roles to the plugin.

The admin user may access plugins and set permissions to allow or to restrict other users to access those plugins. For example, the Admin portlet has the Administrator role associated with it. This tole means that a user registered as an administrator can access the portlet.

▼ To Access Plugins

1 **Log in to Web Space Server as the admin user.**

2 **Navigate to Control Panel → Portal → Plugins Configuration from the Welcome menu.**

Five tabs list different portlet categories: Portlet Plugins, Theme Plugins, Layout Template Plugins, Hook Plugins, and Web Plugins.

▼ To Change Plugin Permissions

1 **Log in to Web Space Server as the admin user.**

2 **Navigate to Control Panel → Portal → Plugins Configuration from the Welcome menu.**

Five tabs list portlets of four different categories: Portlet Plugins, Theme Plugins, Layout Template Plugins, Hook Plugins, and Web Plugins.

3 **Click the link for any portlet.**

For example, click the Activities portlet.

4 **To change the user access permissions for the portlet, or remove roles.**

For example, If the portlet has Power User role, all the users who have this role can access the portlet.

5 **Activate or deactivate the portlet with the Active option.**

6 **Click Save.**

◆ ◆ ◆ CHAPTER 6

Content Management System

The Content Management System (CMS) feature enables you to create, edit, and publish documents and articles online. You can maintain online repositories for storing, controlling, versioning, and publishing of information.

Sun GlassFish Web Space Server provides out-of-the-box content management (CMS) functionality in two major areas: document management and publishing web content. This chapter covers the following topics.

- "Portlet Overview" on page 111
- "Document Library Portlet" on page 113
- "Document Library Data Migration" on page 115
- "Document Library Display Portlet" on page 118
- "Image Gallery Portlet" on page 119
- "Web Content Portlets" on page 121
- "Web Content Display Portlet" on page 130
- "Web Content List Portlet" on page 131
- "Web Content Search Portlet" on page 132
- "Asset Publisher Portlet" on page 134
- "Other Content Portlets" on page 141
- "Tags and Categories" on page 142
- "XSL Content Portlet" on page 143

Portlet Overview

Document management is provided through Web Space Server's *Document Library* and *Image Gallery* portlets. These portlets provide intuitive management of documents, PDF files, text files, and images.

Publishing in Web Space Server is accomplished through the **Web Content** portlet. It features a clean separation between content (data entry) and presentation (layout design), which enables the content to conform to a consistent "look and feel." Additionally, the Web Content portlet

provides a content versioning and approval paradigm (workflow). This system allows for users involved in publishing to fall naturally into three different roles:

1. Writers create, edit, and enter content comprised of text and images.
2. Designers create layouts that display content.
3. Editors edit and approve final output and release it for publication to the portal.

All of the static content is managed and published by the **Web Content** portlet. We can authorize other members of the Web Space Server community to write documentation, but we retain final editorial authority and security. This capability enables a mixture of portlets and Journal articles to coexist, enabling the designer to be more creative with what is displayed. Designers can integrate static content using the **Web Content Display** portlet with a number of other function-rich portlets such as **Navigation** and **Breadcrumb**.

Document Management Portlets

Document management in Web Space Server is provided through the **Document Library**, **Document Library Data Migration**, and **Document Library Display** portlets.

The *Document Library* portlet provides a centralized repository for all documents. Using Document Library, you can organize documents into folders and sub-folders. It is analogous with the file system on your hard-disk. It also enables locking, tagging, and versioning of documents. You can convert the documents in the Document Library to other file formats. Document Library can be configured to store the documents either in a JSR-170 based repository (Jackrabbit), Amazon S3 account, or the file system on your server. Each uploaded document in the Document Library is assigned a unique URL though which it can be accessed from anywhere on the portal. You can set permissions at the folder level and the document level as well. For more information, see "Document Library Portlet" on page 113.

The *Document Library Data Migration* portlet enables you to migrate Document Library data from File System to JCR and conversely. For information, see "Document Library Data Migration" on page 115

The *Document Library Display* portlet allows only viewing of the available folders and uploaded documents. It does not allow the users to add, edit or delete folders and documents. For more information, see "Document Library Display Portlet" on page 118.

Image Management Portlets

Image management in Web Space Server is provided through the Image Gallery portlet. The Image Gallery provides a centralized repository for images that are used throughout the portal and assigns a unique URL to each image. Images can be organized into different folders and sub-folders. The Image Gallery also provides a slide show feature to view the images in a folder. For more information, see "Image Gallery Portlet" on page 119.

Web Content Management Portlets

Generally, most of the content on a web site is static. The Web Content Management feature enables you to create the web content on the fly and publish it to a portal. Web Content Management consists of the following portlets:

- The Web Content portlet forms the main interface for the web publishing system in Web Space Server. The portlet enables users to create, edit, and publish content. Using the portlet, you can create structures and templates through which you can apply the desired layout for an article in one click. It also has built in workflow, versioning, search, and meta-data features. For more information, see "Web Content Portlets" on page 121.
- The Web Content Display portlet displays one content at a time on a page, manually selected from the list of all available contents. Web Content Display portlets are responsible for displaying most of the content on the web sites based on Web Space Server. You can use the drag-and-drop feature of Web Space Server for arranging the content displayed on a page. For more information, "Web Content Display Portlet" on page 130.
- The Web Content List Portlet displays a list of contents that satisfy a set of conditions configured through the portlet preferences such as content type and community. The list will automatically update when new articles are added to the CMS. For more information, see "Web Content List Portlet" on page 131
- Web Content Search portlet allows users to search for web content. You can configure the Web Content Search portlet to search the content within a **Web Content Display** by using its portlet-ID. For more information, see "Web Content Search Portlet" on page 132.

  Web Content Search portlet is powered by Apache Lucene search engine.

Other Content Management portlets

Other content management portlets are described in the following sections:

- "Asset Publisher Portlet" on page 134
- "Other Content Portlets" on page 141
- "Tags and Categories" on page 142
- "XSL Content Portlet" on page 143

Document Library Portlet

The Document Library provides a centralized repository for various document types to be stored and assigns a unique URL to each of them. A company's intranet running Sun GlassFish Web Space Server portal can be used to post internal documentation such as reimbursement forms and charitable donations policies for access by its employees. Alternatively, because each document has its own URL, the **Asset Publisher** portlet on your company's public web site could for example, list the PDF files of quarterly newsletters and their download links.

The Document Library supports multiple repositories that can be set with different access roles. The documents in the repository are version-controlled, allowing users to retrieve any particular revision that has been stored on the system.

Note – There are two alternate ways for accessing the Document Library. You can add the Document Library portlet to your page, or you can navigate to **Control Panel** → **Content** → **Document Library** from the Welcome menu.

- "To Add Folders and Documents" on page 114
- "To Create a Reference to a Document" on page 115

▼ To Add Folders and Documents

1 To add the Document Library portlet to you page

a. Log in to Web Space Server.

b. Choose Add Applications from the Welcome menu.

c. Expand the Content Management folder.

d. Click Add next to the Document Library Portlet.

The Document Library Portlet is added to your page.

The user interface of the portlet contains **Folders**, **My Documents**, and **Recent Documents** tabs. You can search documents using the **Search File Entries** button in the **Folders** tab. The **Add Folder** button in the **Folders** tab allows you to add folders. *My Documents* and *Recent Document* tabs list all the documents and the most recently accessed documents respectively.

2 To add a new folder, click the Add Folder button.

3 Type a name and description for the folder. The permissions for the folder determine what users can do.

A folder is created.

4 Click Save.

5 To add a document to that folder, click on the folder name.

6 Click Add Document.

7. **You can either add more folders to further divide your documents into more specific categories or you can add a document to the current folder.**

8. **Browse and upload a document.**

   Documents can be uploaded using the classic uploader or the multiple uploader. The multiple uploader enables you to upload multiple documents at a time whereas the classic uploader enables you to upload only one document at a time. The default size limit for documents is 3000K bytes. To change the upload size limit, override the `dl.file.max.size` property in the `portal-ext.properties` file.

9. **Type a title and description for the document.**

10. **Click Save when finished.**

    The document is added to the Document Library.

▼ To Create a Reference to a Document

1. **Log in to Web Space Server.**

2. **Click Add Applications from the Welcome menu.**

3. **Expand the Content Management folder.**

4. **Click Add next to the Document Library Portlet.**

   The Document Library Portlet is added to your page.

5. **Select a document in the Document Library.**

6. **Click the Actions button corresponding to the document. Select Edit and copy the URL.**

   You can use the URL as a reference to the document and paste the URL in the URL field of a browser to access the document.

Document Library Data Migration

Document Library Data Migration is a new feature added with Sun GlassFish Web Space Server 10.0 Update 5. You get this feature by default, as you install Web Space Server 10.0 Update 5 from the Update Tool. For the instructions to install updates from the Update Tool, see "Installing Updates from the Update Tool" on page 40.

By default, Web Space Server stores Document Library data in File System, which is not a standard repository. Generally, Java Content Repository (JCR) is preferred in a production

environment. Web Space Server 10.0 Update 5 offers the Document Library Data Migration, which makes it possible to migrate Document Library data from File System to JCR and conversely.

You can access the **Document Library Data Migration** feature from the Control Panel.

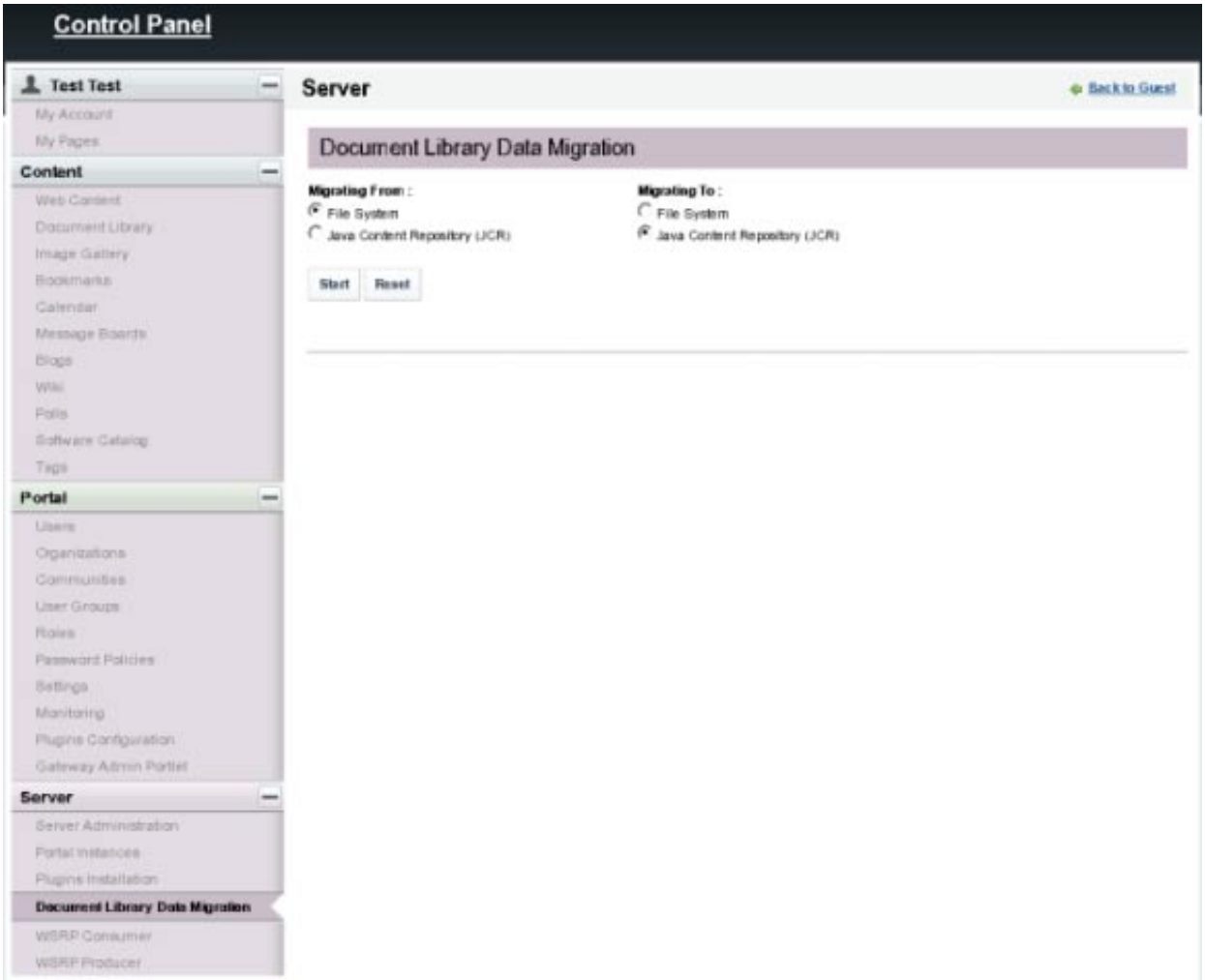

FIGURE 6–1 The Document Library Data Migration Feature

▼ To Start Document Library Data Migration

After installing Web Space Server 10.0 Update 5 perform the following instructions.

1 **Navigate to Control Panel from the Welcome menu.**

2 **Select Document Library Data Migration under Server.**

You can migrate data from File System to JCR or from JCR to File System. If you select File System under Migrating From then Java Content Repository (JCR) under Migrating To is selected automatically and the same is true with the order reversed. Since by default the Document Library data is stored in File System, the data needs to be migrated from File System to JCR.

3 **After selecting File System under Migrating From (this is the default selection), click Start.**

If there are no documents in the Document Library, it displays an error message. Make sure that you have uploaded some documents to Document Library, before clicking Start to start data migration.

The screen shows the list of Communities and Organizations, where each of them contain at least one folder in its Document Library. The list is organized by the Portal Instances configured, and displays the Company Id of each of the Portal instances. There is a progress bar associated with each Community or Organization that indicates the progress of data migration, after clicking the Continue button.

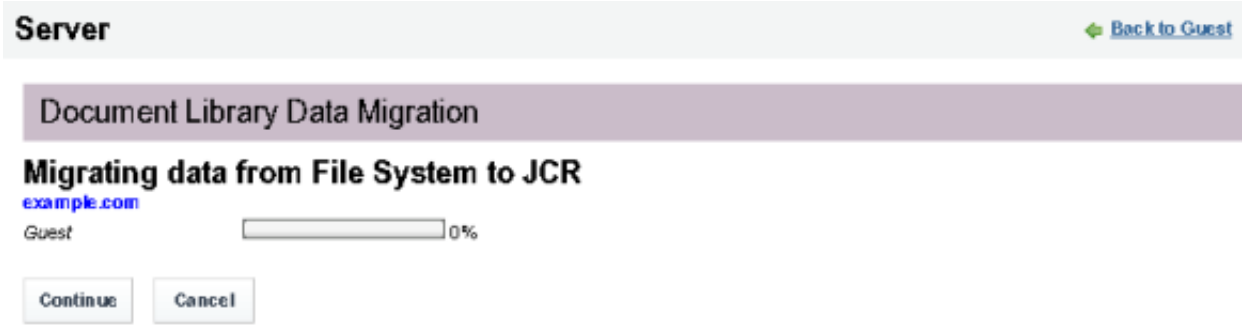

FIGURE 6–2 Starting Document Library Data migration

4 **Click Continue for starting data migration.**

You can click Cancel to cancel the data migration operation.

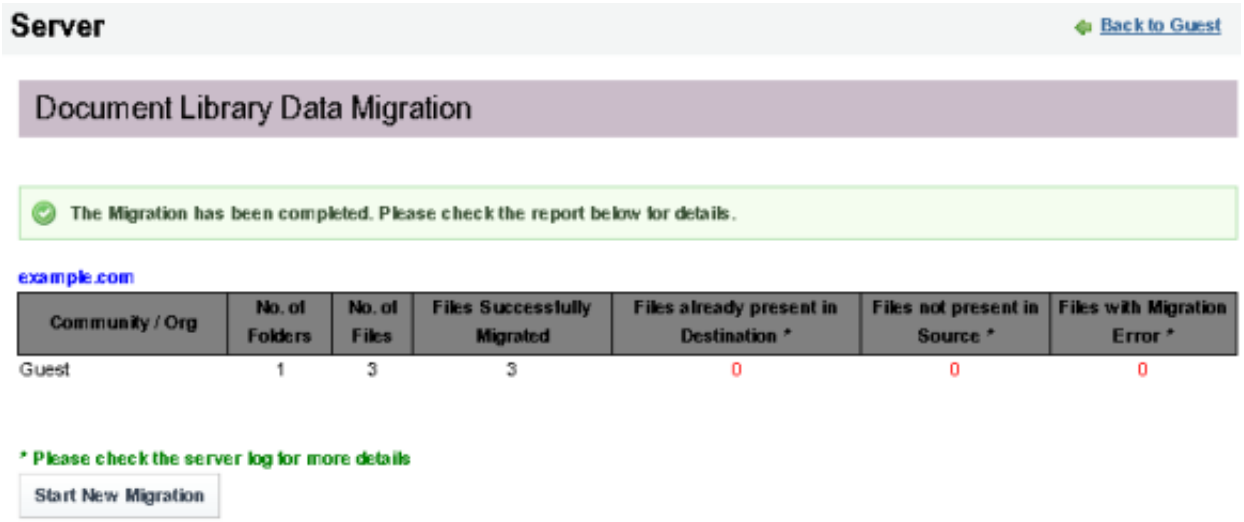

FIGURE 6–3 Migrating Document Library Data

After the data migration is complete, a message is displayed. You can see from which Community or Organization the data is migrated, and the number of folders and files migrated.

5 **Click Start New Migration to start a new data migration.**

Document Library Display Portlet

The Document Library Display Portlet provides the display functionality for Document Library. You can navigate to the folders and document in the Document Library by accessing the Document Library Display Portlet.

You can add Document Library Display Portlet to your page by selecting it from the Content Management portlets in the Add Applications window.

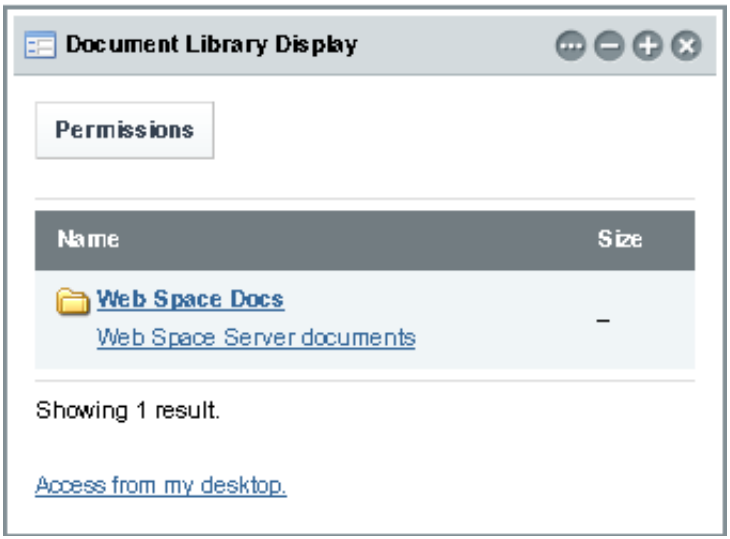

FIGURE 6–4 Document Library Display Portlet

Image Gallery Portlet

Like the Document Library, the Image Gallery provides a centralized repository for images used throughout the Sun GlassFish Web Space ServerPortal. It assigns a unique URL to each image.

▼ To add an Image to the Image Gallery

1. **Log in to Web Space Server.**
2. **Navigate to Control Panel → Content → Image Gallery from the Welcome menu.**
3. **Click the Add Folder button.**
4. **Type a name and description and click Save.**
   The folder is added to the portlet.
5. **Click the folder name.**
   You can add a subfolder or an image within the folder. In our example we are adding an image for the folder we have already created.
6. **Click the Add Image button.**

7 **Browse and upload a document.**

You can upload images using the classic uploader or the multiple uploader. The multiple uploader enables you to upload multiple images at a time whereas the classic uploader allows only one image at a time. The default maximum image size is 3000 Kbytes. To change the upload size limit, modify the `ig.image.max.size` property in the `portal-ext.properties` file.

8 **Type a title and description for the image.**

▼ To create Reference to an Image in the Image Gallery

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Image Gallery from the Welcome menu.**

3 **Navigate to a folder with images.**

4 **Select an image.**

5 **Click Edit, and copy the URL.**

You can use the URL as a reference to the image.

6 **Paste the URL in the URL field of a browser to access the image.**

▼ To View an Image Slide Show

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Image Gallery from the Welcome menu.**

3 **Click a folder containing images.**

4 **Click the View Slide Show button to display a slide show of the images contained in the folder.**

A new window appears. In the new window, images are displayed in a sequence, one after the other. The slide show window has buttons that enable you to play and pause the slide show, and to view next and previous image for an image. You can set a time interval for displaying images, by using the Speed list. You can set a time interval between 1 to 10 seconds, with 3 seconds being the default time interval for the slide show.

Web Content Portlets

The Web Content application consists of **Web Content**, **Web Content Display**, **Web Content List**, and **Web Content Search** portlets.

- **Web Content** - An administration portlet that enable you to create, update, search, and manage content.
- **Web Content Display** - Displays one content piece at a time, manually selected from the list of available content pieces.
- **Web Content List** - Displays set of content piecess that satisfy a set of conditions configured through the portlet preferences, such as content type and community.
- **Web Content Search** - Enables search for web content.

The Web Content portlet is used to create all CMS content. The Web Content Display and Web Content List portlets are used to display those contents. This portlet enables writers to easily edit content displayed on web pages without having to sort through complex code.

Overview of Web Content Portlets

Structures, templates, and articles are the backbone of the Web Content portlet functionality.

- **Structures** define the type and number of content pieces, for example, text, text area, images, selection lists, and so on.
- **Templates** determine how content pieces will be arranged or laid out.
- **Articles** are where each content piece is populated with actual text and images.

The point of a structure is to unify journal articles with the same numbers and types of items. For example, a Management Bio section of a web site might have ten biographies, each requiring an image for the executive headshot, a text for the headline, and a text area for the main biography. A structure could be created with one image, one text, and one text area, each named accordingly. This structure enables writers to create the individual biographies and other texts without needing to re-create the page structure for each biography.

Designers can create several templates for one structure to allow for a variety of presentations or give writers discretion in deciding the best layout.

All specific text and images are entered when a user adds or edits an article. The user chooses the layout based on the templates affiliated with a structure. Because multiple templates can be associated to a structure, the user can select the most suitable template.

Structures

A structure can be used by any number of templates and articles within the community in which the structure is defined. When you create a structure, you have to define an XML schema for it.

▼ To create a Structure

1. **Log in to Web Space Server.**
2. **Navigate to Control Panel → Content → Web Content from the Welcome menu.**
3. **To create a structure, click the Structures tab in the Web Content portlet, and then click on the Add Structure button.**

   The structure creation page is displayed.

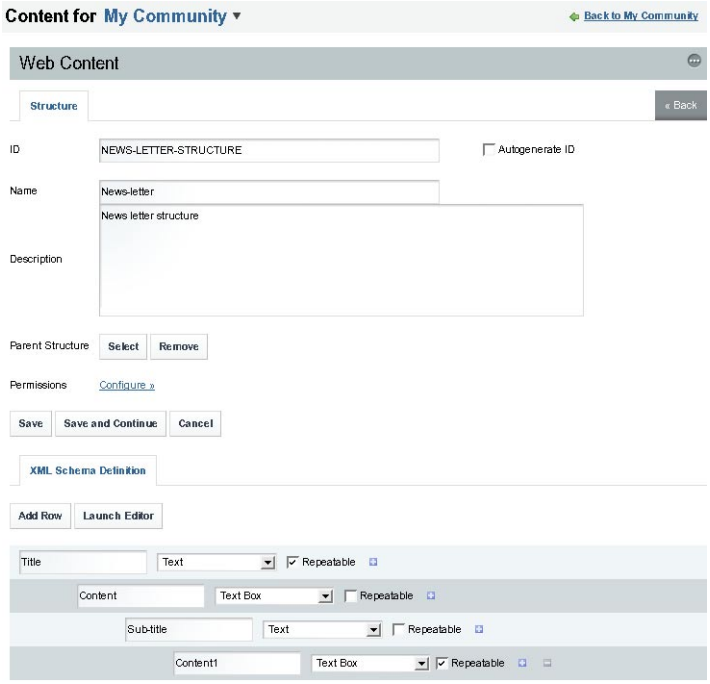

FIGURE 6–5 Creating a Structure

4. **Type an ID, or select the Autogenerate ID option for the system to generate an ID.**

   Choosing your own ID means that the structure will be easier to identify when associating it with templates and articles. The convention is to separate words in the ID with a hyphen, NEWS-LETTER-STRUCTURE. The structure ID cannot be changed once your structure has been saved, so be sure you provide the ID exactly how you want it to appear.

5. **Type a name and a description for the structure.**

6. **Design your XML Schema Definition.**

   a. **Click Add Row button to add the XML scheme from the user interface.**

   b. **In the new field, type a name and a content type for the field image, text, Boolean flag, and so on.**

   Tip – If you are comfortable with XML or HTML you can edit the XSL directly by clicking Launch Editor. One simple approach is to add a few elements using the GUI. Then edit the XML directly by copying the syntax for the already added elements.

   Empty spaces are not allowed within a field name. Rows can be moved up or down by clicking on Arrow buttons. You can use the Plus button to add multiple levels of rows nested inside one another. A field can be repeatable or non-repeatable. Selecting the *Repeatable* option makes a field repeatable. If a field is repeatable, you can repeat the field in an article using the structure. You will be able to add the field as many times as it is desired, by clicking a plus sign.

   ---

7. **Click Save.**

   The Structure is created and the system generates a *WebDAV URL* for the structure. WebDAV (Web-based distributed authoring and versioning) enables remote access of the structure. To determine the WebDAV URL for the structure, open the structure in edit mode after creating it.

   For details about WebDAV, go to:

   `http://en.wikipedia.org/wiki/WebDAV`

   `http://www.webdav.org/`.

▼ To Edit a Structure

1. **Log in to Web Space Server.**

2. **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3. **Click the Structures tab.**

4. **Click the Actions button corresponding to a structure, and choose Edit from the menu.**

   The Structure opens in Edit mode.

   You can edit anything in the structure except for the structure ID, which can not be changed once the structure has been created.

5. **Backup the current XML file by clicking the Download button so you can easily revert to your old structure if necessary.**

6. **Edit the structure.**

   Editing the name and description will not affect other features of the Web Content portlet, but adding, deleting, and modifying fields will affect the templates and articles that are associated with the structure.

   If you add fields, the articles associated will have extra fields for additional content. If you delete fields, associated content in associated articles will be deleted.

7. **Click Save to save changes.**

▼ To Delete a Structure

1. **Log in to Web Space Server.**

2. **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3. **Click the Structures tab.**

   To delete a structure, you must first delete all the articles and disassociate or delete all the templates associated with that structure.

4. **To delete all articles,**

   a. **Click the Actions button and choose View Articles from the menu.**

      All the articles associated with the Structure are listed.

   b. **Select all articles, and click on the Delete button.**

5. **Click the Structure tab again.**

6. **Click the Actions button corresponding to a Structure, and select View Templates from the menu.**

   All the templates associated with the structure are listed.

7. **To delete all the remplates associated with the structure, select all templates and then click the Delete button.**

8. **Select the structure and click the Delete button to delete the structure.**

   Alternatively, click the Actions button and choose Delete from the menu.

Templates

This section describes how to create, edit, and delete a template.

▼ To Create a Template

1. **Log in to Web Space Server.**

2. **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3. **Click the Templates tab and click the Add Template button to create a template.**

   The Template page appears.

4. **Type an ID, Name and Description for the template. Click the Select button to select a Structure for the template.**

   The Select and Remove buttons corresponding to the Structure field can be used to associate or to disassociate a structure from the Template.

   A window for selecting Structures is launched.

5. **Select a structure.**

6. **To edit the template layout content, you can use one of two methods.**

   - **To create a new template:**

     a. **Click the Launch Editor button.**

        An Editor appears.

     b. **Select an Editor Type: Plain or Rich. Plain is the default.**

     c. **Click Update after making changes to the template.**

- **To use an existing template:**

  a. **Select a language from the Language Type list: VM, SXL, CSS.**
     VM, SXL, and CSS are the available language options.

  b. **Click the Browse button to upload the script for an existing template.**

  c. **Select the Format Script option.**

  d. **Click Launch Editor to open the browsed script.**

  e. **Modify the template.**

  f. **Click Update after making changes to the script.**

7 **If desired, add a small image to represent the template in the description fields by selecting the Use Small Image option.**

You can type the URL path for an image in the Small Image URL field, or you can browse an image using the Browse button.

8 **Click Save.**

The template is created successfully and the system generates a WebDAV URL for the template. WebDAV (web-based distributed authoring and versioning) enables remote access of the template. To determine the WebDAV URL for the template, open the template in edit mode.

For details about WebDAV go to:

http://en.wikipedia.org/wiki/WebDAV

http://www.webdav.org/

▼ To Edit a Template

Before editing the actual template, you might want to view the associated articles whoselayout will be affected by any changes made to your template. Click View Articles from the Action menu to view associated articles.

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3 **Click the Templates tab.**

4 **Click the Actions button corresponding to a template, and choose Edit from the menu.**

5 **Edit the template as desired.**

In the edit screen, you can edit anything in the template except for the template ID, which cannot be changed once the template has been created.

6 **Click Save.**

7 **If desired, click View Articles to see the articles with the new template layout.**

▼ To Delete a Template

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3 **Click the Templates tab.**

To delete a template, you must first delete all the articles associated with that template.

4 **To delete all articles, click the Actions button and choose View Articles from the menu.**

All the articles associated with the Template are listed.

5 **Select all articles, and click Delete.**

A dialog box with the message "Are you sure you want to delete the selected articles?" appears. Click OK to delete all articles.

6 **Click the Templates tab once again.**

7 **Select the template and click Delete.**

Click OK on the dialog box to confirm deleting the template.

Articles

This section describes how to create, edit, and delete an article.

▼ To Create an Article

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3 **Click the Web Content tab.**

All articles are listed.

4 **To create a new article, click the Add Web Content button.**

You can create a basic or an advanced article.

- **To create a basic article:**

  A basic article does not make use of a template, workflow, or other advanced articles.

  a. **Click Basic in the top-right corner of the portlet window.**

     Skip this step if you are already on this page.

  b. **Provide a name, abstract, and the body of content for the article.**

  c. **Click Save.**

- **To create an advanced article:**

  You can apply additional options for an advanced article.

  a. **Click Advanced in the top-right corner of the portlet window.**

  b. **To select a Structure and a Template for the article, click the Select button besides the Template field under Form and Presentation.**

     A dialog box appears with the message "Selecting a new template will change the structure, available input fields, and available templates? Do you want to proceed?" appears.

  c. **Click OK.**

     The Templates window appears.

  d. **To select a template, click on the name of the template. In this example, click NEWS-LETTER-TEMPLATE to select it as the template for the article.**

     The structure used by the template is added to the article. Note that the structure of the article has changed.

     Note – If you want to remove the template or the structure applied to an article, click Remove corresponding to the structure.

     ---

  e. **Type a name for the article.**

  f. **Select the Type for Categorization for the article.**

     These details help users to search an article and help organize articles.

g. **Set the Schedule details.**

Set values for Display Date, Expiration Date, and Review Date fields. The default setting does not set an expiration date and review date.

h. **Click Save to create the article.**

To Edit an Article

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3 **Click the Web Content tab.**

All articles are listed.

4 **Click on the Actions button for an article and select Edit from the menu.**

The article appears in edit mode. You can edit anything in the article except for the article ID, which can not be changed once the article has been created.

You can choose to increment the version every time you edit the article to help all users see how often the article has been changed. If you feel that the changes you are making are very minor, you can choose not to increment it.

Note that if you set the expiration date to a date earlier to the current date, you will no longer be able to select that article for use in the Web Content Display portlet.

5 **Make the desired changes and click Save.**

To Delete an Article

1 **Log in to Web Space Server.**

2 **Navigate to Control Panel → Content → Web Content from the Welcome menu.**

3 **Click the Web Content tab.**

All articles are listed.

4 **Click the Actions button for an article and choose Delete from the menu.**

Alternatively, select the article ID and click the Delete button.

Web Content Display Portlet

You can create, configure, and display articles using the Web Content Display portlet. You can have more than one instance of this portlet on a page. The portlet displays all approved articles.

The portlet embeds Edit Web Content, Select Web Content, and Add Web Content icons.

- Edit Web Content — Provides the interface to edit the article displayed using the portlet. The Edit Web Content icon is displayed only when an article is selected for display.
- Select Web Content — Provides the interface to select an article for display.

  You can enable a number of settings on the articles that are displayed, printing, comments, and comment ratings.
- Add Web Content — Provides the interface to create a new article for display.

  When you add web content using the Web Content Display portlet, you need to click Save and Approve for the web content (article) to be displayed by the Web Content Display portlet. If you just click Save or Save and Continue, you see a message on the portlet which reads, *<Content-ID> is expired, is not approved, does not have any content, or no longer exists*. For the web content to display, you need to edit the article by selecting it from the Web Content portlet, and do Save and Approve for the article.

Web Content Display portlet displays an article, when the article is approved.

▼ To Select an Article for Display

1. **Log in to Sun GlassFish Web Space Server as the admin User.**
2. **Choose Add Applications from the Welcome menu.**
3. **Add the Web Content Display portlet to your page.**
4. **Click the Select Article icon which is the same as the Configuration button.**
5. **Click Search Articles button.**

   All available articles are displayed.
6. **Select an article for display.**
7. **Determine the Setup configuration.**

   The Setup tab provides the following options:

   - Show Available Locales - Displays all the locales that are available for the article.
   - Convert To - Supports converting the article to different document formats.

- Enable Print - Enables printing of the article.
- Enable Ratings - Enables rating of the article.
- Enable Comments - Enables adding comments for the article.
- Enable Comment Ratings - Enables rating the comments received for the article.

8. **Determine display support for mobile devices:**

   a. **Open the Supported Clients tab.**

   b. **Enable or disable the Mobile Devices option.**

      The default is enabled. Disable the option, if you do not provide display support for mobile devices.

   c. **Click Save.**

9. **Click the Return to Full Screen link.**

Web Content List Portlet

Admin users can configure the Web Content List portlet to display the articles associated with a community and content type. You can have more than one instance of this portlet on a page.

▼ To Configure the Web Content List Portlet

1. **Log in to Sun GlassFish Web Space Server as the admin User.**
2. **Click Add Applications from the Welcome menu.**
3. **Add the Web Content List portlet to your page.**
4. **Choose the Configuration option from the menu controls for the portlet.**
5. **Click the Current tab under the Setup tab.**
6. **Select values for Community, Article Type, and other attributes.**

   If you are using Web Space Server samples, you can select My Community and General for Community and Article Type respectively.

Note – My Community is the default Community if you are using Web Space Server samples.

7 **Click Save.**

8 **Click the Return to Full Page link.**
The portlet lists the articles available on My Community.

Web Content Search Portlet

Use the Web Content Search portlet to search for a word or phrase within the content of an article. You can define the search behavior by making changes to the search configuration.

▼ To Customize the Search Behavior

1 **Log in to Sun GlassFish Web Space Server as the admin User.**

2 **Click Add Applications from the Welcome menu.**

3 **Add the Web Content Search portlet to your page.**

4 **Click the Configuration button from the menu controls.**

5 **Define the search behavior.**

- **Article Type - Select the article type which need to be included in the search. The default search includes all types of articles. When you select an article type, the search includes only the articles of that type.**
- **Only show results for articles listed in a Web Content Display portlet - By default, search includes all the articles that are listed in any of the instances of the Web Content Display portlet.**
- **Target Portlet ID - Type the instance ID of the Web Content Display portlet to conduct the search only inside that particular instance of the portlet. Disable the "Only show results for articles listed in a Web Content Display portlet" option before you specify the target portlet instance ID.**

6 **Click Save.**

Configuring Search for a Web Content Display Portlet

Web Content Display portlet is an instanceable portlet meaning that you can have a number of Web Content Display portlets displaying the content from a number of articles on your page. To improve the search efficiency you can configure the Web Content Search portlet so that it crawls the content of only the selected instance of the Web Content Display portlet.

▼ To Configure Search for a Web Content Display Portlet

1. **Log in to Sun GlassFish Web Space Server as the admin User.**
2. **Choose Add Applications from the Welcome menu.**
3. **Add the Web Content Search portlet to your page.**
4. **Choose the Configuration option from the menu controls.**
5. **If you are pasting a new target portlet ID or overwriting an existing target portlet ID, disable the "Only show results for web content listed in a Web Content Display portlet." option and must be enabled again after pasting the target portlet ID.**
6. **Navigate to a web content display portlet's configuration screen and copy the portlet ID.**
7. **Paste the portlet ID of the web content display portlet as the target portlet ID.**

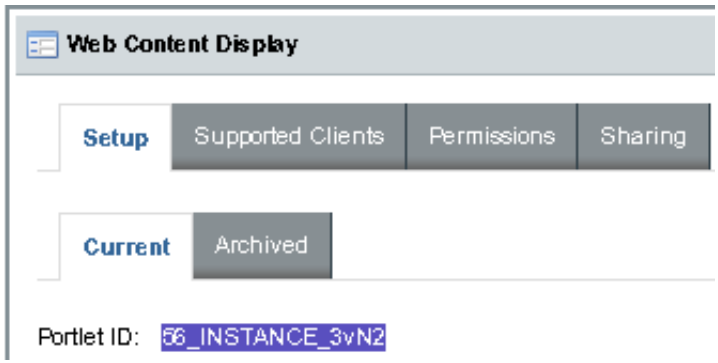

FIGURE 6–6 Copying the Portlet ID from a Web Content Display portlet

8. **Select the "Only show results for web content listed in a Web Content Display portlet." option.**
9. **Click Save.**

Asset Publisher Portlet

Use the Asset Publisher portlet to add, create, edit, and delete content assets such as blogs, bookmarks, documents, images, and web content. The main function of the Asset Publisher portlet is to display the content assets, depending on the settings applied for a portlet instance.

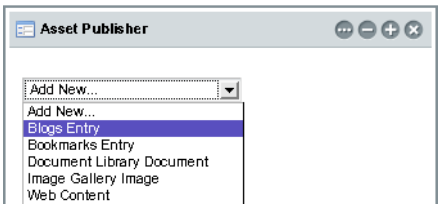

FIGURE 6–7 Asset Publisher Portlet

Asset Publisher can be used to create/publish the following:

- Blogs Entry
- Bookmarks Entry
- Document Library Document
- Image Gallery Image
- Web Content

▼ To add the Asset Publisher Portlet to a Page

1. **Log in to Web Space Server.**
2. **Choose Add Applications and expand the Content Management folder.**
3. **Add the Asset Publisher portlet to your page.**

   The Asset Publisher portlet is added to your page.

Configuring the Asset Publisher Portlet

To configure the asset selection criteria of the Asset Publisher portlet, click the Configuration button from the portlet menu bar. The Configuration screen appears.

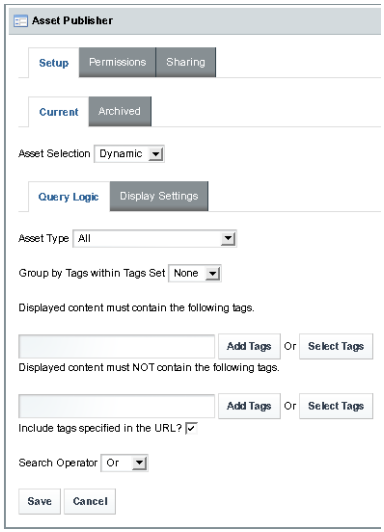

FIGURE 6–8 Configuring the Asset Publisher Portlet

You can set different asset selection criteria for different instances of the Asset Publisher portlet, so that you display only the selected asset type on each instance of the portlet. For example, if you select Blogs Entry from the Asset Type list and click Save, that particular instance of the Asset Publisher portlet displays only the blog entries, and allows you to add only blogs.

Asset selection criteria can be Dynamic or Manual, with "Dynamic" being the default value. When you select Manual, you have to select existing entries for an asset type, or create new entries for a selected asset type. You can add new content assets only for the type selected in Asset Type.

You can apply various display settings by clicking the Display Settings tab.

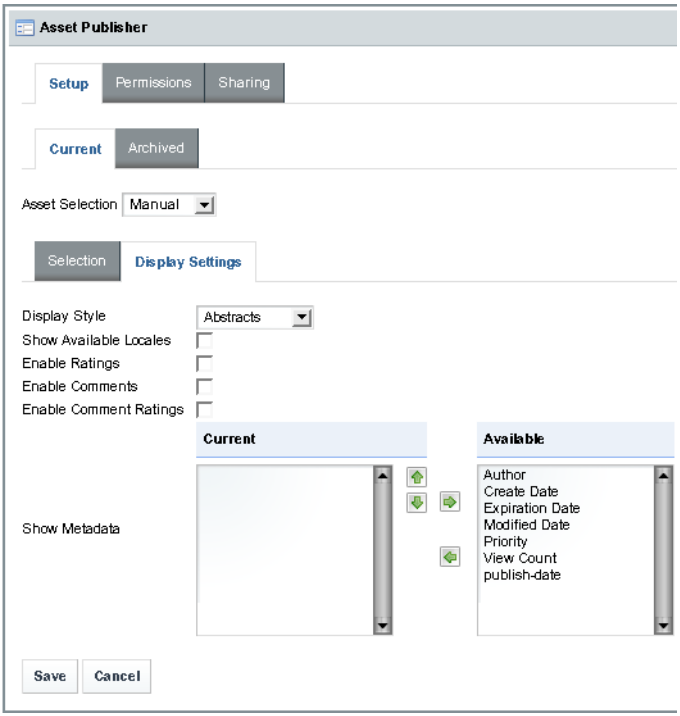

FIGURE 6–9 Display Settings

For example, you can apply some metadata for the assets on display by moving some items such as Author and Create Date from the Available list to the Current list. The items on the Current list will be used as metadata for displayed items.

▼ To add a Blogs Entry

1. **Log in to Web Space Server.**
2. **Choose Add Applications and expand the Content Management folder.**
3. **Add the Asset Publisher portlet to your page.**

   The Asset Publisher portlet is added to your page.

4. **Select Blogs Entry from the list on the Asset Publisher portlet.**

   The Blogs Entry page has many advanced options. You can apply styles and formatting on your blog entry. You can add Tags and Suggestions to your blog.

   a. **To add the blog to of social bookmarking sites such as BlinkList, Digg, and Furl, click the Entries link on the top right corner of the page. Click the Add this to link on the page that appears.**

   b. **Click Edit to continue working on the blog entry.**

5. **Complete your blog entry and click Publish.**

   You are displayed on the Asset Publisher portlet.

6. **To view the blog entry, click on the blog title or click Read More.**

7. **To edit the blog entry, click the Edit button.**

▼ To add a Bookmarks Entry

1. **Log in to Web Space Server.**

2. **Choose Add Applications and expand the Content Management folder.**

3. **Add the Asset Publisher portlet to your page.**

   The Asset Publisher portlet is added to your page.

4. **Select Bookmarks Entry from the list on the Asset Publisher portlet.**

5. **Type the Name, URL, and Description for a bookmark.**

6. **Indicate a folder in which to store the bookmarks,**

   - To select a folder from the available folders click Select.
   - To create a new folder:

   a. **Click the Add Folder button.**

   b. **Type a name and a description for the folder and click Save.**

      If you want to create a subfolder for the folder, click on the link for the folder and click the Add Folder button again.

7. **Click the Choose button corresponding to a folder to choose the folder.**

8 **Click Save.**

The bookmark is added to the selected folder, and the saved bookmark appears on the Asset Publisher portlet.

9 **Click the Go link to view the bookmarked page.**

▼ To Delete a Bookmarks Entry

1 **Log in to Web Space Server.**

2 **Choose Add Applications and expand the Content Management folder.**

3 **Add the Asset Publisher portlet to your page.**

The *Asset Publisher* portlet is added to your page. You can see the bookmarks already on the page.

4 **Click the Edit Bookmark button.**

5 **Select the folder containing the bookmark.**

6 **Delete the folder.**

All the bookmarks contained in the folder are deleted.

▼ To add a Document Library Document

1 **Log in to Web Space Server.**

2 **Choose Add Applications and expand the Content Management folder.**

3 **Add the Asset Publisher portlet to your page.**

The Asset Publisher portlet is added to your page.

4 **Select Document Library Document from the list on the Asset Publisher portlet.**

5 **Click the Browse button to browse a document.**

6 **Type a name and description for the document.**

7 **Indicate a folder in which to store the document library document,**

- To select a folder from the available folders click Select.

- To create a new folder:

a. **Click the Add Folder button.**

b. **Type a name and a description for the folder and click Save.**

   If you want to create a subfolder for the folder, click on the link for the folder and click the Add Folder button again.

8 **Click the Choose button corresponding to a folder to choose the folder.**

9 **Click Save.**

The document is added to the selected folder, and the saved document appears on the Asset Publisher portlet.

10 **Click the Download link to download the document.**

▼ To Delete a Document Library Document

1 **Log in to Web Space Server.**

2 **Choose Add Applications and expand the Content Management folder.**

3 **Add the Asset Publisher portlet to your page.**

The Asset Publisher portlet is added to your page. You can see the documents published on the page.

4 **Click the Edit Document button.**

5 **Select the folder containing the document.**

6 **Delete the folder.**

All the documents contained in the folder are deleted.

▼ To add an Image Gallery Image

1 **Log in to Web Space Server.**

2 **Choose Add Applications and expand the Content Management folder.**

3. **Add the Asset Publisher portlet to your page.**
   The Asset Publisher portlet is added to your page.
4. **Select Image Gallery Image from the list on the Asset Publisher portlet.**
5. **Click the Browse button to browse an image.**
6. **Type a name and description for the image.**
7. **Indicate a folder in which to store the image gallery image,**
   - To select a folder from the available folders click Select.
   - To create a new folder:

   a. **Click the Add Folder button.**

   b. **Type a name and a description for the folder and click Save.**
      If you want to create a subfolder for the folder, click on the link for the folder and click the Add Folder button again.
8. **Click the Choose button corresponding to a folder to choose the folder.**
9. **Click Save.**
   The image is added to the selected folder, and the saved image appears on the Asset Publisher portlet.
10. **Click the View link to see the image.**

▼ To Delete an Image Gallery Image

1. **Log in to Web Space Server.**
2. **Choose Add Applications and expand the Content Management folder.**
3. **Add the Asset Publisher portlet to your page.**
   The Asset Publisher portlet is added to your page. You can see the images published on the page.
4. **Click the Edit Image button.**
5. **Select the folder containing the document.**

6 **Delete the folder.**

All the images contained in the folder are deleted.

▼ To add Web Content

1 **Log in to Web Space Server.**

2 **Choose Add Applications and expand the Content Management folder.**

3 **Add the Asset Publisher portlet to your page.**

4 **Select Web Content from the list on the Asset Publisher portlet.**

Write an article using the options available on the screen. You can set an *Expiration Date* and *Review Date* for the journal article.

5 **Click Save and Approve.**

The Web Content article is displayed on the Asset Publisher portlet.

6 **Click the Read More link to read the article.**

Note – Make sure that you click Save and Approve after creating the article. If the article is not approved, you get an error message appears saying "The requested resource is not found" when you click the *Read More* link for the article.

---

7 **Click the edit button to make changes to the article.**

The default version number of the Web Content is set to 1.0. You can select the Increment Version on Save option to increment the version number of the article each time you update the article. You can use the *Expire* button to make the article expire immediately. You can use the *Delete* button to delete the article.

Other Content Portlets

Other portlets provide content management features.

- **Breadcrumb Portlet** - Displays the path for the page that you are on.
- **Categories Navigation Portlet** - Provides category-based navigation.
- **Navigation Portlet** - Displays the navigation structure. You can customize the navigation structure using the Configuration menu control.
- **Nested Portlets Portlet** - To drag and nest portlets using the Nested Portlets Portlet.

- **Recent Documents Portlet** - Displays the most recently accessed documents.
- **Site Map Portlet** - Provides the site mapping of your page.

Tags and Categories

You can create tag sets and tag entries, and categories and category entries for using them on wikis, blogs, and articles within a Community.

Tags improve the searchability of wikis, blogs, and articles.

Procedures to create tag sets and tag entries are discussed below. You can create *Vocabulary* and *Categories* by following the similar procedure. To create Vocabulary and Categories, choose *Control Panel* → *Content* → *Tags and Categories*, and select **Categories**. The rest of the procedure is similar to that of creating tag sets and tag entries.

▼ To Add a Tag Set

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Content → Tags and Categories from the Welcome menu.**
3. **Click Tag Sets.**
4. **Click Add Tag Set button.**
5. **Type a name for the tag set.**
6. **Click Save.**
   You can add Vocabulary by following the similar procedure.

▼ To Add a Tag Entry

After creating a tag set, you can create tag entries under it.

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Content → Tags and Categories from the Welcome menu.**
3. **Click Tag Sets.**
4. **Click the Add Tag button.**

5 **Type a name for the tag.**

6 **Select a tag set for the tag from the To Vocabulary list.**

7 **Click Save.**

To complete creating the tag, you are required to add a property for the tag entry. properties form key value pairs. If deemed necessary, you can add more than one pair of properties for a tag entry. You can also add and delete properties.

8 **Add a property for the tag.**

9 **Click Save.**

You can add Categories by following the similar procedure.

XSL Content Portlet

You can configure the XSL Content Portlet to display the content of an XML file using an XSL stylesheet. You can import an `XSL-Content`<*content-ID*>`.portlet.lar` file and configure the *XSL Content Portlet* to display the content in the file. Use the Export/Import and Configuration buttons in the menu controls for the portlet to import the `lar` file and to configure it for display. You can also make a backup for the `lar` file.

◆ ◆ ◆ CHAPTER 7

Web Services for Remote Portlets

The implementation of the WSRP 2.0 standard inSun GlassFish Web Space Server includes both the WSRP consumer and the WSRP producer. The WSRP producer implementation supports publishing JSR286 portlets for use by a remote WSRP consumer. The JSR286 portlets are deployed locally on a portal server. These portlets can be published by an instance of the WSRP producer.

About WSRP

WSRP 2.0 is an OASIS standard that simplifies integration of remote applications and content into portals. The WSRP standard defines presentation-oriented, interactive web services with a common, well-defined interface and protocol for processing user interactions and for providing presentation fragments suited for mediation and aggregation by portals, as well as conventions for publishing, finding, and binding such services.

Because the WSRP interfaces are common and well-defined, all web services that implement the WSRP standard plug in to all WSRP compliant portals. A single, service-independent adapter on the portal side is sufficient to integrate any WSRP service. As a result, WSRP is the means for content and application providers to provide their services to organizations running portals with no programming effort required.

See the WSRP 2.0 standard for more information:

`http://www.oasis-open.org/committees/tc_home.php?wg_abbrev=wsrp`

WSRP for Sun GlassFish Web Space Server

The following topics describe WSRP and WSRP administration:

- "Accessing WSRP on Sun GlassFish Web Space Server" on page 146
- "WSRP Administration" on page 146

Accessing WSRP on Sun GlassFish Web Space Server

The WSRP Producer and the WSRP Consumer hold the WSRP functionality.

▼ To Access WSRP on Web Space Server

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel from the Welcome menu.**

   You can find the WSRP Consumer and WSRP Producer under Server control options on the left pane.

WSRP Administration

The WSRP Producer Admin and WSRP Consumer Admin portlets provide WSRP Administration functionality. Generally, in any real life scenario, WSRP Producer and WSRP Consumer are on different machines, with WSRP Consumer running on a remote machine. To keep it simple, you can use the WSRP Producer and the WSRP Consumer from a single Web Space Server installation. The following topics cover different functions of WSRP administration.

- "Creating a WSRP Producer" on page 146
- "Creating a WSRP Consumer" on page 149
- "Creating WSRP Producers and Consumers Without Registration" on page 150
- "Installing Remote/WSRP Portlets" on page 153

Creating a WSRP Producer

You use the WSRP producer to create and manage WSRP Producers.

What Is a WSRP Producer?

A WSRP producer offers locally deployed portlets for remote deployment. A remotely deployed WSRP consumer can connect to the producer, and can use the portlets offered by the producer.

A portal can host multiple producers. The consumer can import remote portlets offered by a producer. You can create one or more producers. A producer can optionally require registration. If a producer supports registration, then consumers must register to work with the producer.

Inband and Outband Registration

Registration is used to build a technical or business relationship between the consumer and the producer. While creating a producer, you can define any one of the following registration mechanisms: Inband registration or Outband registration.

If the producer requires registration and enabled for Inband registration, the consumer can provide the details through WSRP interface and register with the producer. The consumer also has an option to provide the registration handle obtained through Outband communication.

If the producer requires registration and is enabled for Outband registration, the consumer should obtain the registration handle through Outband communication and provide the registration handle during registration. Outband registration happens with manual intervention such as phone calls, email, and so on. For a producer that supports Outband registration, the producer gets the details about the consumer through Outband communication, and it creates a registration handle for the consumer. The registration handle is communicated to the consumer through Outband communication.

Producers Without Registration

For a producer that does not require registration, the consumer is not required to type any information or get any information through Outband communication. In this case, the consumer cannot customize or edit the portlets offered by the producer. The producer that does not support registration provides read-only portals to the consumers.

▼ To Create and Enable a WSRP Producer

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Server → WSRP Producer from the Welcome menu.**
3. **Click the Add Producer button.**
4. **Type a name for the Producer.**

   For example, you can create a Producer called NewProducer. This screen also provides option to export a version of WSRP service (choose both 1.0 and 2.0) for exporting both version 1.0 and version 2.0 service.

Note – The name of the producer or a consumer must not contain empty spaces or any special characters.

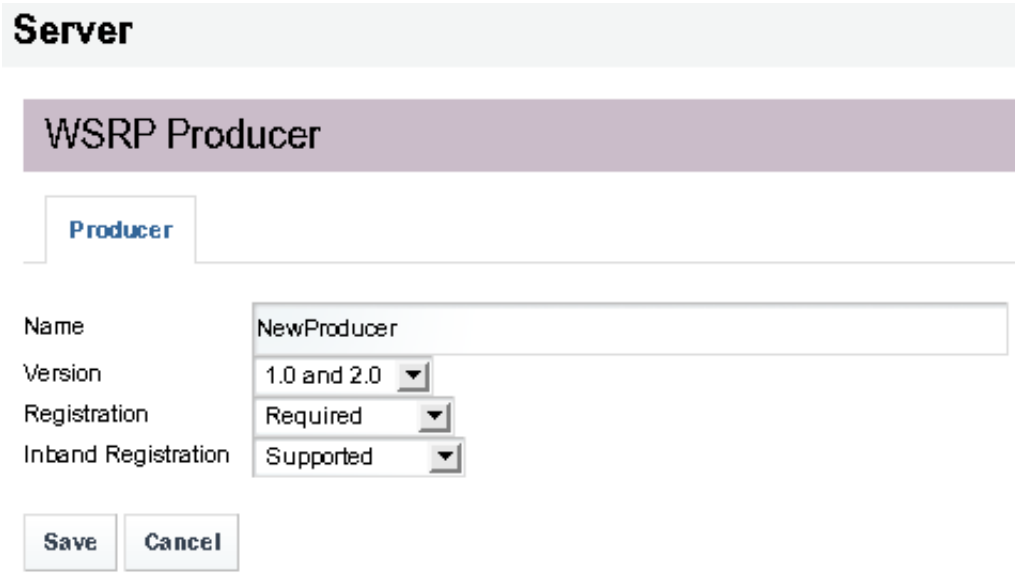

FIGURE 7–1 Creating a New WSRP Producer

5 **Click Save.**

The Producer is created, but is disabled by default.

6 **To enable the WSRP Producer:**

a. **Click the link for a selected producer.**

In this example, click the NewProducer link. The producer is displayed.

b. **Move some portlets from the Unpublished list to the Published list.**

c. **Click Save.**

The producer is saved.

d. **Click the Disabled link.**

The producer is displayed again.

e. **Select Enabled from the Status list and click Save.**

The producer is enabled.

Note – By default, the newly created WSRP producer exports both WSRP version 1.0 and WSRP version 2.0 services in the exported WSDL. On checking the WSDL URL, you should see both version 1.0 and version 2.0 services.

Creating a WSRP Consumer

To communicate with the portlets offered by the producer, a consumer needs to add a configured producer.

▼ To Create a WSRP Consumer

To create a consumer, a producer WSDL URL is required. You can copy the WSDL URL from the NewProducer created in the above step.

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Server → WSRP Consumer from the Welcome menu.**
3. **Click the Connect to Producer button.**
4. **Provide the WSRP Producer WSDL URL and click Next.**

FIGURE 7–2 Providing the WSRP Producer URL for Creating a WSRP Consumer.

The next screen prompts you to choose the WSRP version.

5 **Choose Version 2.0 and click Next.**

The next screen prompts you to select a registration type.

6 **Select Inband and Outband.**

For more information about these registration types, see "Inband and Outband Registration" on page 147

7 **(Optional) Specify a Name and Lifetime for the consumer.**

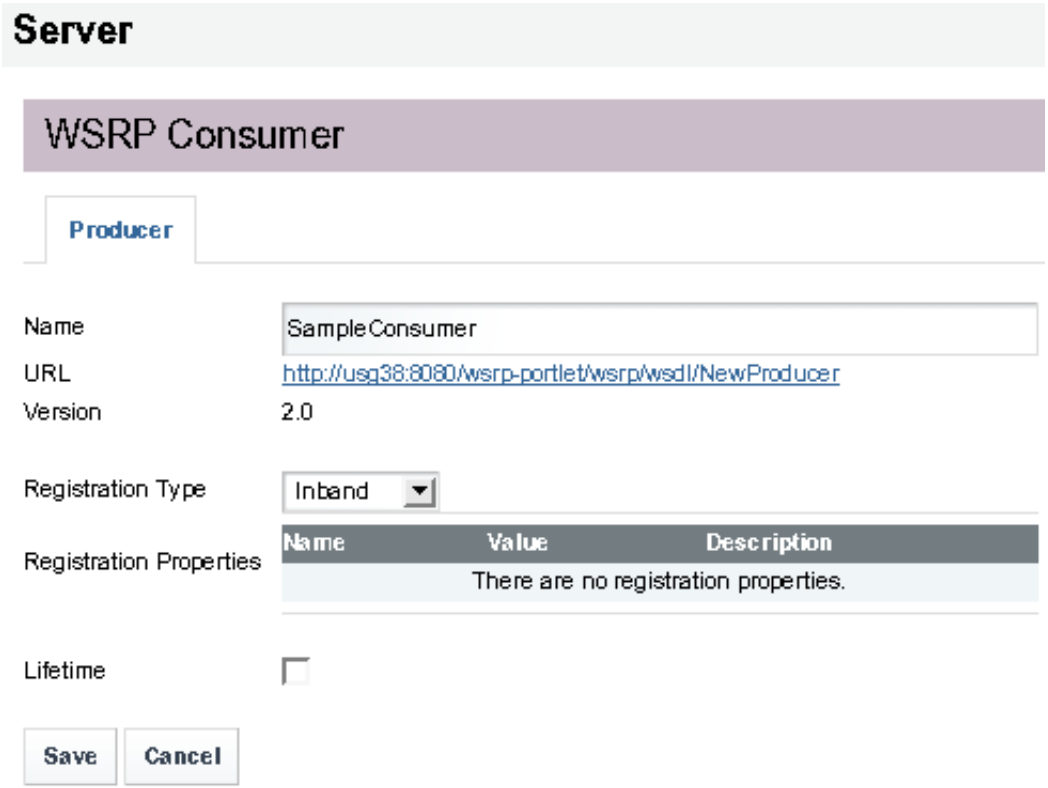

FIGURE 7–3 Version, Registration Type, Lifetime and Other Details for the WSRP Consumer

In case of Outband registration, you have to specify a registration handle. Select Inband registration and click Save. The consumer is created.

Creating WSRP Producers and Consumers Without Registration

The consumer is not required to type any details while adding a configured producer, if the producer does not require registration.

▼ To Create a Producer Without Registration

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Server → WSRP Producer from the Welcome menu.**
3. **Click the Add Producer button.**
   Specify a name for the producer. Select Not Required for Registration.

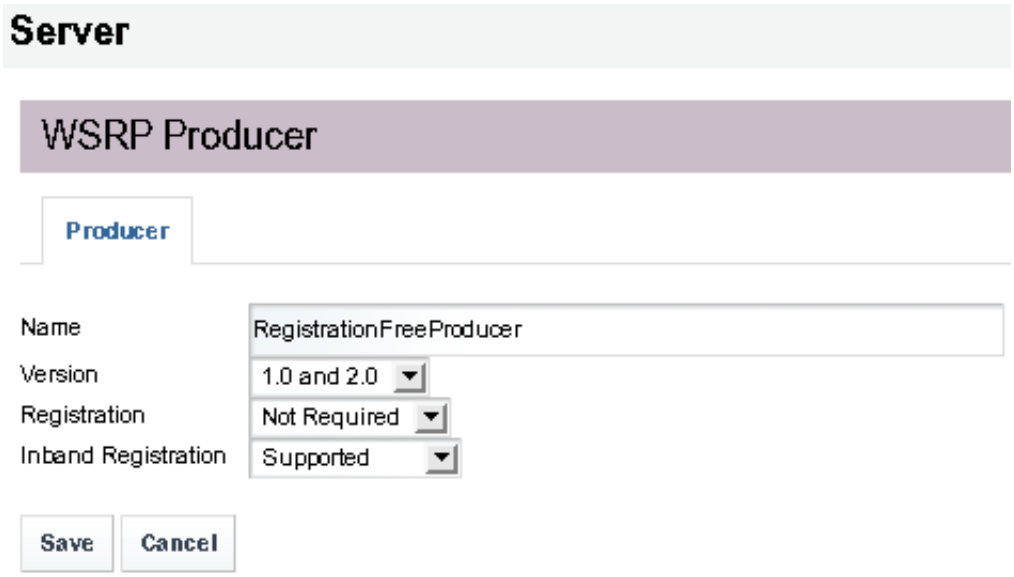

FIGURE 7–4 Creating a Producer Without Registration

4. **Click Save.**
   The producer is created, but is disabled by default. Enable the Producer.
5. **To enable the WSRP Producer:**
   a. **Click the link for a selected producer.**
      In this example, click the NewProducer link. The producer is displayed.
   b. **Move some portlets from the Unpublished list to the Published list.**
   c. **Click Save.**
      The producer is saved.

d. Click the Disabled link.

The producer is displayed again.

e. Select Enabled from the Status list and click Save.

The producer is enabled.

Note – By default, the newly created WSRP producer exports both WSRP version 1.0 and WSRP version 2.0 services in the exported WSDL. On checking the WSDL URL, you should see both version 1.0 and version 2.0 services.

▼ To Create a Consumer Without Registration

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Server → WSRP Consumer from the Welcome menu.**
3. **Click the Connect to Producer button.**
4. **Provide the WSDL URL of a producer without registration and click Next.**
5. **The next screen prompts you to choose the WSRP version.**
6. **Select Version *2.0* and click Next.**
7. **Type a name for the Consumer and click Save.**

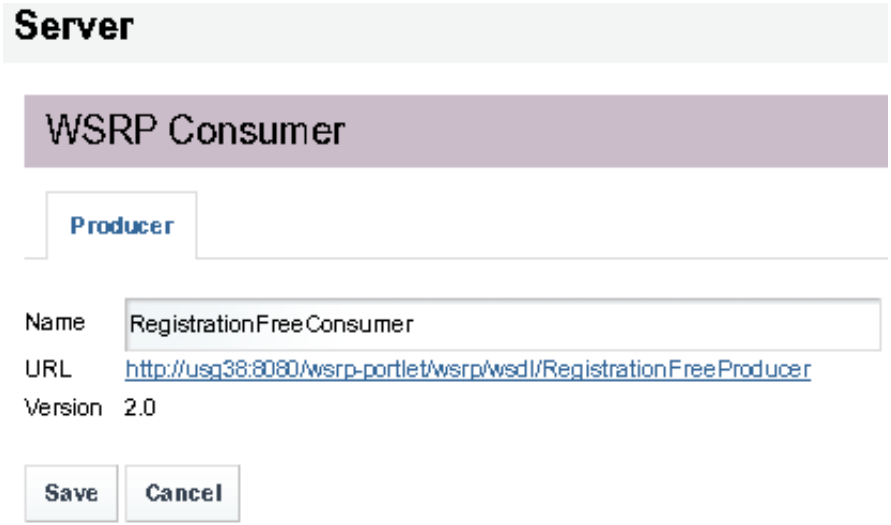

FIGURE 7–5 Creating a Consumer Without Registration

Installing Remote/WSRP Portlets

This section describes the process to install Remote/WSRP portlets on Sun GlassFish Web Space Server.

▼ To Install a Remote/WSRP Portlet

1. **Log in to Web Space Server as the admin user.**
2. **Navigate to Control Panel → Server → WSRP Consumer from the Welcome menu.**
3. **Click the Actions button corresponding to a consumer and choose Install Portlets from the menu.**

   The Available Portlets list displays all the portlets available with the producer.
4. **Select a portlet from the list, and type a name for the portlet.**

   Note – Make sure to specify a name for the portlet. If no name is displayed for the portlet, identifying it will be difficult.
5. **Click Save.**
6. **Click the Portlet tab to view the portlet.**

◆ ◆ ◆ CHAPTER 8

Advanced Web Space Server Configuration

There are also some lower level settings that you may want to further customize. They include changing certain out-of-box defaults, security configuration, and adding features to Web Space Server through plugin management. The following sections are explained in this chapter:

- "Deploying Applications to Web Space Server" on page 155
- "Promoting a Portal to Production Environment" on page 157
- "Clustering of Web Space Server" on page 161
- "Configuring Jackrabbit With MySQL" on page 164
- "Installing Plugins" on page 167
- "Creating a Custom Plugin Repository" on page 168

Deploying Applications to Web Space Server

Sun GlassFish Web Space Server server provides an extensible platform where custom applications which includes portlets, web plugins, hook plugins and theme plugins can be developed (using Netbeans Portal Pack) and deployed to augment the functionality of Web Space Server. The artifacts can be copied into the Hot Deploy directory of Web Space Server. The Hot Deploy listener injects the necessary libraries into the `WAR` file and deploys them to the GlassFish Enterprise Server by taking advantage of `JSR-88` feature or the auto deploy directory feature GlassFish Enterprise Server.

In many production deployments it is possible that the auto deploy is disabled for security reasons or the server is deployed to the GlassFish cluster where the applications should always be deployed to the DAS (Domain Administration Server). In these two cases, copying the `WAR` files to the Hot Deploy directory for deploying the applications is not possible. To address this scenario of deployment Web Space Server provides a command line tool `process.xml` that which generate a "massaged" `WAR` (with all required injections that are otherwise performed by the Hot Deploy listener) that can be manually deployed to the server using `asadmin` tool.

Deploying Applications Using process.xml

Consider the example of deploying a custom portlet `solr-web-5.2.0.1.war` to Web Space Server using process.xml.

▼ To Deploy Applications Using process.xml

1. **Copy the custom portlet (`solr-web-5.2.0.1.war`) into the `unprocessed` directory located inside the root directory for Web Space Server (the directory to which Web Space Server is unzipped).**

   `cp solr-web-5.2.0.1 /`*Webspace_install_root*`/var/webspace/war-workspace/unprocessed`

2. **Navigate to** *Webspace_install_root*`/var/webspace/war-workspace` **folder.**

   `cd /`*Webspace_install_root*`/var/webspace/war-workspace`

3. **Run `ant -f process.xml`.**

   Provide the required inputs where necessary. The below screen illustrates the process.

```
$ cp solr-web-5.2.0.1 /Webspace_install_dir/var/webspace/war-workspace/unprocessed
$ cd /Webspace_install_dir/var/webspace/war-workspace
$ ant -f process.xml
Buildfile: process.xml

check-ant:

show-user-warning:
    [input] JAVA_HOME must be set to JDK 1.5 or greater and java must be available for execution. Webcontainer must be


set-war-properties:
    [input] Enter war file (include full path)  [/Webspace_install_dir/var/webspace/war-workspace/my.war]
/Webspace_install_dir/var/webspace/war-workspace/unprocessed/solr-web-5.2.0.1.war
    [input] Is war a portlet, web, theme, hook or layouttemplate?  [portlet]
web
    [input] Enter deployed war name  [solr-web-5.2.0.1]


process:
     [java] Loading jar:file:/Webspace_install_dir/var/webspace/war-workspace/sources/webspace/WEB-INF/lib/portal-impl.j
     [java] Loading jar:file:/Webspace_install_dir/var/webspace/war-workspace/sources/webspace/WEB-INF/lib/portal-impl.j
     [java] Loading jar:file:/Webspace_install_dir/var/webspace/war-workspace/sources/webspace/WEB-INF/lib/enterprise.ja
     [java] Loading jar:file:/Webspace_install_dir/var/webspace/war-workspace/sources/webspace/WEB-INF/lib/enterprise.ja
     [java] Loading jar:file:/Webspace_install_dir/var/webspace/war-workspace/sources/webspace/WEB-INF/lib/portal-impl.j
     [java] 2009-04-28 23:39:02,177 [main] INFO  com.liferay.portal.util.PortalImpl - Portal lib directory /opt/wsyner
     [java]   Expanding: /Webspace_install_dir/webspace/war-workspace/unprocessed/solr-web-5.2.0.1.war into /var/tmp/200
     [java]   Copying 1 file to /var/tmp/20090428233902276/WEB-INF/classes
```

```
     [java]   Copying 1 file to /var/tmp/20090428233902276/WEB-INF/classes
     [java]   Building war: /var/tmp/20090428233903352
     [java] 2009-04-28 23:39:03,944 [main] INFO  com.liferay.portal.kernel.util.ServerDetector - Detected server
     [java]   Deleting directory /var/tmp/20090428233902276
     [echo]
     [echo] Processed war is in /Webspace_install_dir/var/webspace/war-workspace/finals.

BUILD SUCCESSFUL
Total time: 33 seconds
```

Promoting a Portal to Production Environment

You can create a custom portal using Sun GlassFish Web Space Server. The following are the two scenarios for migrating to the production environment:

- **Moving from development to production**

  The development team working on customization of Web Space Server want to go live with the product after deploying it to the production server.

- **Deploying content from staging to production**

  After the production server is successfully commissioned, further enhancements to the content of the production system can be realized using Staging and Workflow.

Moving From Development to Production

During the development phase a team of developers would collaborate and work on customization of Web Space Server. Customization might include creating or modifying portlets, hooks, themes, layouts and pages. Out of all these artifacts, the pages are stored in the database while others can be deployed in WAR file format. For the first time production cut-over, the database from the development environment can be exported and imported into the production environment.

The following is the process involved:

1. Generate the `WAR` files for custom portlets, themes, layouts and hooks and deploy them to the production Web Space Server. These `WAR` files need to be placed in the hot deploy area.
2. Export the database from the development environment.
3. Import the database that has been exported in the previous step into the production environment.

Deploying Content From Staging to Production

In this scenario, the content can be developed in the staging environment and can be published to the production server. The WebSpace server provides a “Staging” feature for Community and Organization pages to address this requirement.

Essentially, the community and organization "staging" feature provides an option to deploy pages to the same server. Meaning, an administrator can review the page changes before publishing them and the publishing can be scheduled. In addition, a workflow can be attached to the process so the changes can be approved by an authority.

In the "Manage Pages" there is an option for "Publish to Remote" which would actually deploy the pages to a remote server. This can be the process for promoting the content that is developed in the "staging/development" environment to the production system.

Staging

You can “Stage” pages on the production server before they are published to live. This can also include the "approval process" of different levels of authority.

Here is how it works:

▼ To Do Staging Without Workflow

1. **Log in to Web Space Server as admin user.**
2. **Administrator or the owner of a community or an organization can enable Activate Staging via Manage Pages from the Control Panel.**
3. **Once staging is enabled, a user with appropriate privileges can add/modify pages and the content to pages and publish them when they are finalized. During the development of the pages while in the staging, live pages are not affected, and no changes are visible on live pages.**

▼ To Do Staging With Workflow

1. **Log in to Web Space Server as admin user.**
2. **Administrator or the owner of a community or organization can enable Activate Staging and Activate Workflow via Manage Pages from the Control Panel.**
3. **Choose the number of stages for the Workflow. Default is 3.**
4. **Specify the roles for each stage of approval process. Administrator can create the roles with scope and permissions on the My Community portlet. For Content Creator Community Role assign the Manage Pages role from the Define Permissions option.**

5 **A Content Creator can create pages and submit the proposal. Once the pages are approved through the approval chain, the final approver can publish the page to live system.**

Publishing to a Remote Server

Remote publishing allows publishing pages from a staging server (a staging server where the pages are approved and published locally) to production server. When using the remote publishing, the user who is publishing remotely must have a user account on both servers with the same email address and password.

The production server (where the pages are published to) must be configured to accept connections from the staging server.

For example, the following entry in `portal-ext.properties` would allow the remote publishing from IP address `192.18.123.38`.

```
tunnel.servlet.hosts.allowed=127.0.0.1,SERVER_IP,192.18.123.38
```

If you have deployed the **OpenSSO** add-on, `web.xml` for the tunnel-web application should be configured in such a way that "Liferay Servlet Filter" and "Secure Liferay Servlet Filter" are using the default filter which is `com.liferay.portal.servlet.filters.secure.SecureFilter` instead of the filter that ships with the add-on which is `com.sun.portal.servlet.filters.soo.accessmanager.BasicAuthFilter`.

Offline Promotion of Content to Production

The remote publishing feature is very useful when staging and production environments are "connected". In case, they are not connected, meaning the network firewall prevents any connections from staging to production due to the company's security policy then the remote publishing will not be an option. In this event, the pages can be promoted to the production "offline".

After the pages and its content are finalized, an administrator can "export" the pages from staging environment which will generate a `lar` file. The same can be copied over to the production server and imported into its corresponding community/organization. The "Manage Pages" option for a community/organization contains a tab for "Export/Import" which allows an administrator to export or import the page including its content, permissions and the like.

Activating Staging, Activating Workflow, and Publishing Pages to Live

This section discusses the procedure for activating staging and workflow for Communities and Organizations, and publishing their pages to live.

Admin user can activate staging for Communities and Organizations. When you activate staging for Communities or Organizations, you can preview their pages and make changes to them before publishing them to live production environment.

For the procedure to create a new Community, see To add a Community. The following procedure explains how you can stage Communities. You can stage Organizations by following the similar procedure.

▼ To Stage a Community and to Publish a Page to Live

1. **Log in to Sun GlassFish Web Space Server as admin user.**
2. **Choose Add Application from the Welcome menu, and add My Communities portlet to your page.**
3. **Click the Communities I Own tab on the My Communities portlet.**
4. **To stage a Community, click the Actions button corresponding to a Community and choose Manage Pages from the menu.**
   In this example, choose the 'cms' Community.
5. **Click the Settings tab, and enable the Activate Staging option.**
   The community is staged to the production environment.
6. **Choose My Places from the Welcome menu and navigate to a page on the community.**
   A live page for 'cms' is displayed.
7. **To view the staged page, choose Staging → View Staged Page from the Welcome menu.**
8. **To publish the page to live, choose Staging → Publish to Live from the Welcome menu.**
9. **To view the live page, choose Staging → View Live Page from the Welcome menu.**
   The Publish To Live window appears.
10. **Select the pages you want to publish and click Publish.**
    A dialog box with the message “Are you sure you want to publish these pages?” appears.
11. **Click OK to publish the selected pages.**

Clustering of Web Space Server

Once you have Web Space Server installed in more than one node on your application server, there are several optimizations that need to be made. At a minimum, Web Space Server should be configured in the following way for a clustered environment:

Note – The default HSQL database can't be used in a clustered environment. You can configure MySQL or any other compatible database to use in a clustered environment.

A cluster setup need to use the enterprise version of GlassFish 2.1 patch 2 or later.

- All nodes should be pointing to the same Web Space Server database.
- Jackrabbit, the JSR-170 content repository, should be on a shared file system (not recommended) or in a database that is shared by all nodes.
- Similarly, Lucene, the full text search indexer, should be:
  - On a shared file system available to all the nodes (not really recommended, though), or
  - In a database that is shared by all the nodes, or
  - On separate file systems for all of the nodes, or
  - Disabled, and a separate pluggable enterprise search server configured.
- If you have not configured your application server to use farms for deployment, the hot deploy folder should be a separate folder for all the nodes, and plugins will have to be deployed to all of the nodes individually. This can be done via a script.

Many of these configuration changes can be made by adding or modifying properties in your `portal-ext.properties` file. Remember that this file overrides the defaults that are in the `portal.properties` file. The original version of this file can be found in the Liferay source code or can be extracted from the `portal-impl.jar` file in your Liferay installation. It is a best practice to copy the relevant section that you want to modify from `portal.properties` into your `portal-ext.properties` file, and then modify the values there.

- "Jackrabbit Sharing" on page 161
- "Lucene Configuration" on page 163
- "Hot Deploy" on page 163

Jackrabbit Sharing

Web Space Server uses Jackrabbit from Apache as its JSR-170 compliant document repository. By default, Jackrabbit is configured to store the documents on the local file system upon which Liferay is installed, in the *Glassfish home*`/domains/domain1/webspace/jackrabbit` folder. Inside this folder is Jackrabbit's configuration file, called `repository.xml`.

To simply move the default repository location to a shared folder, you do not need to edit Jackrabbit's configuration file. Instead, find the section in `portal.properties` labeled *JCR* and copy/paste that section into your `portal-ext.properties` file. One of the properties, by default, is the following:

```
jcr.jackrabbit.repository.root=${resource.repositories.root}/jackrabbit
```

Change this property to point to a shared folder that all of the nodes can see. A new Jackrabbit configuration file is generated in that location.

Note that because of file locking issues, this is not the best way to share Jackrabbit resources. If two people have logged in at the same time uploading content, you could encounter data corruption using this method, and therefore it is not used for a production system. Instead, to enable better data protection, you should redirect Jackrabbit into your database of choice. You can use a database for this purpose. This requires editing Jackrabbit's configuration file.

The default Jackrabbit configuration file has sections commented out for moving the Jackrabbit configuration into the database. This has been done to make it as easy as possible to enable this configuration. To move the Jackrabbit configuration into the database, simply comment out the sections relating to the file system and comment in the sections relating to the database. These by default are configured for a MySQL database. If you are using another database, you will likely need to modify the configuration, as there are changes to the configuration file that are necessary for specific databases. For example, the default configuration uses Jackrabbit's `DbFileSystem` class to mimic a file system in the database. While this works well in MySQL, it does not work for all databases. For example, if you are using an Oracle database, you will need to modify this to use `OracleFileSystem`. Please see the Jackrabbit documentation at http://jackrabbit.apache.org for further information.

You will also likely need to modify the JDBC database URLs so that they point to your database. Don't forget to create the database first, and grant the user ID you are specifying in the configuration file access to create, modify, and drop tables.

Once you have configured Jackrabbit to store its repository in a database, the next time you bring up Liferay, the necessary database tables will be created automatically. Jackrabbit, however, does not create indexes on these tables, and so over time this can be a performance penalty. To fix this, you will need to manually go into your database and index the primary key columns for all of the Jackrabbit tables.

All of your Liferay nodes should be configured to use the same Jackrabbit repository in the database. Once that is working, you can create a Jackrabbit cluster (please see the following section).

Lucene Configuration

Lucene, the search indexer which Web Space Server uses, can be in a shared configuration for a clustered environment, or an index can be created on each node of the cluster. If you wish to have a shared index, you will need to either share the index on the file system or in the database.

The Lucene configuration can be changed by modifying values in your `portal-ext.properties` file. Open your `portal.properties` file and search for the text Lucene. Copy that section and then paste it into your `portal-ext.properties` file.

If you wish to store the Lucene search index on a file system that is shared by all of the Web Space Server nodes, you can modify the location of the search index by changing the `lucene.dir` property. By default, this property points to the `/webspace/lucene` folder inside the home folder of the user running Web Space Server:

```
lucene.dir=${resource.repositories.root}/lucene/
```

Change this to the folder of your choice. To make the change take effect, you will need to restart Web Space Server. You can point all of the nodes to this folder, and they will use the same index.

Like Jackrabbit, however, this is not the best way to share the search index, as it could result in file corruption if different nodes try reindexing at the same time. A better way is to share the index via a database, where the database can enforce data integrity on the index. This is very easy to do; it is a simple change to your `portal-ext.properties` file.

There is a single property called `lucene.store.type`. By default this is set to go to the file system. You can change this so that the index is stored in the database by making it the following:

```
lucene.store.type=jdbc
```

The next time Web Space Server is started, new tables will be created in the Web Space Server database, and the index will be stored there. If all the Web Space Server nodes point to the same database tables, they will be able to share the index.

Alternatively, you leave the configuration alone, and each node will then have its own index. This ensures that there are no collisions when multiple nodes update the index, because they all will have separate indexes.

Hot Deploy

Plugins which are hot deployed will need to be deployed separately to all of the Web Space Server nodes. Each node should, therefore, have its own hot deploy folder. This folder needs to be writable by the user under which Web Space Server is running, because plugins are moved from this folder to a temporary folder when they are deployed. This is to prevent the system from entering an endless loop, because the presence of a plugin in the folder is what triggers the hot deploy process.

When you want to deploy a plugin, copy that plugin to the hot deploy folders of all of the Web Space Server nodes. The hot deploy directory for Web Space Server when running on GlassFish is *Glassfish home*`/domains/domain1/webspace/deploy`. Depending on the number of nodes, it may be best to create a script to do this. Once the plugin has been deployed to all of the nodes, you can then make use of it (by adding the portlet to a page or choosing the theme as the look and feel for a page or page hierarchy).

Some containers contain a facility which allows the end user to deploy an application to one node, after which it will get copied to all of the other nodes. If you have configured your application server to support this, you won't need to hot deploy a plugin to all of the nodes, as your application server will handle it transparently. Make sure, however, that you use hot deploy mechanism to deploy plugins, as in many cases Web Space Server slightly modifies `plugin.war` files when hot deploying them.

Configuring Jackrabbit With MySQL

Liferay includes Jackrabbit by default as its JSR-170 Java Content Repository.

Image Gallery and Document Library portlets use jackrabbit to store data. Jackrabbit stores CMS (Content Management System) data in a file system. The following procedure explains how to configure Jackrabit to use MySQL database to store the data from Image Gallery and Document Library portlets.

▼ To Configure Jackrabbit With MySQL

1 **Add the following properties to the `portal-ext.properties` file.**

```
jcr.initialize.on.startup=true
jcr.jackrabbit.repository.root=/jackrabbit
jcr.jackrabbit.config.file.path=/jackrabbit/repository.xml
dl.hook.impl=com.liferay.documentlibrary.util.JCRHook
```

The Web Space Server evaluation bundle has a `portal-ext.properties` file in the *GlassFish install-dir*`/domains/domain1/applications/j2ee-modules/webspace/WEB-INF/classes`. When you are using a Web Space Server bundle not including samples, you have to create a `portal-ext.properties` file under *ROOT-DIR*`/webspace-for-gfv2/var/webspace/war-workspace/customs/webspace/WEB-INF/classes`.

2 **Make changes to the `repository.xml` file residing under *GlassFish install-dir*`/webspace-gfv2-`*OS*`/var/webspace/data/jackrabbit`.**

Most generally, when you are configuring Jackrabbit for MySQL, you will have to remove the commenting for all the markup related with MySQL. For other databases, For other databases, you will have to change the connection credentials and schema settings.

Modified `repository.xml` may look like this:

```
<?xml version="1.0"?>

<Repository>
    <!--<FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
        <param name="path" value="${rep.home}/repository" />
    </FileSystem>-->

    <!--
    Database File System (Cluster Configuration)

    This is sample configuration for mysql persistence that can be used for
    clustering Jackrabbit. For other databases, change the connection,
    credentials, and schema settings.
    -->

    <FileSystem class="org.apache.jackrabbit.core.fs.db.DbFileSystem">
        <param name="driver" value="com.mysql.jdbc.jdbc2.optional.MysqlDataSource"/>
        <param name="url" value="jdbc:mysql://nicp239.india.sun.com:3306/lportal?useUnicode=true&amp;#038;amp&amp;#059;ch
        <param name="user" value="root" />
        <param name="password" value="password" />
        <param name="schema" value="mysql"/>
        <param name="schemaObjectPrefix" value="J_R_FS_"/>
    </FileSystem>

    <Security appName="Jackrabbit">
        <AccessManager class="org.apache.jackrabbit.core.security.SimpleAccessManager" />
        <LoginModule class="org.apache.jackrabbit.core.security.SimpleLoginModule">
            <param name="anonymousId" value="anonymous" />
        </LoginModule>
    </Security>
    <Workspaces rootPath="${rep.home}/workspaces" defaultWorkspace="default" />
    <Workspace name="${wsp.name}">
        <!--<FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
            <param name="path" value="${wsp.home}" />
        </FileSystem>
        <PersistenceManager class="org.apache.jackrabbit.core.persistence.bundle.BundleFsPersistenceManager" />--

        <!--
        Database File System and Persistence (Cluster Configuration)

        This is sample configuration for mysql persistence that can be used for
        clustering Jackrabbit. For other databases, change the  connection,
        credentials, and schema settings.
        -->

        <PersistenceManager class="org.apache.jackrabbit.core.state.db.SimpleDbPersistenceManager">
            <param name="driver" value="com.mysql.jdbc.jdbc2.optional.MysqlDataSource"/>
```

```
                <param name="url" value="jdbc:mysql://nicp239.india.sun.com:3306/lportal?useUnicode=true&#038;amp&#
        <param name="user" value="root" />
        <param name="password" value="password" />
        <param name="schema" value="mysql" />
        <param name="schemaObjectPrefix" value="J_PM_${wsp.name}_" />
        <param name="externalBLOBs" value="false" />
    </PersistenceManager>
    <FileSystem class="org.apache.jackrabbit.core.fs.db.DbFileSystem">
        <param name="driver" value="com.mysql.jdbc.jdbc2.optional.MysqlDataSource"/>
            <param name="url" value="jdbc:mysql://nicp239.india.sun.com:3306/lportal?useUnicode=true&#038;amp&#
        <param name="user" value="root" />
        <param name="password" value="password" />
        <param name="schema" value="mysql"/>
        <param name="schemaObjectPrefix" value="J_FS_${wsp.name}_"/>
    </FileSystem>
</Workspace>
<Versioning rootPath="${rep.home}/version">
    <!--<FileSystem class="org.apache.jackrabbit.core.fs.local.LocalFileSystem">
        <param name="path" value="${rep.home}/version" />
    </FileSystem>
    <PersistenceManager class="org.apache.jackrabbit.core.persistence.bundle.BundleFsPersistenceManager" />-->

    <!--
    Database File System and Persistence (Cluster Configuration)

    This is sample configuration for mysql persistence that can be used for
    clustering Jackrabbit. For other databases, change the connection,
    credentials, and schema settings.
    -->

    <FileSystem class="org.apache.jackrabbit.core.fs.db.DbFileSystem">
        <param name="driver" value="com.mysql.jdbc.jdbc2.optional.MysqlDataSource"/>
                <param name="url" value="jdbc:mysql://nicp239.india.sun.com:3306/lportal?useUnicode=true&#038;a
        <param name="user" value="root" />
        <param name="password" value="password" />
        <param name="schema" value="mysql"/>
        <param name="schemaObjectPrefix" value="J_V_FS_"/>
    </FileSystem>
    <PersistenceManager class="org.apache.jackrabbit.core.state.db.SimpleDbPersistenceManager">
        <param name="driver" value="com.mysql.jdbc.jdbc2.optional.MysqlDataSource"/>
                <param name="url" value="jdbc:mysql://nicp239.india.sun.com:3306/lportal?useUnicode=true&#038;a
        <param name="user" value="root" />
        <param name="password" value="password" />
        <param name="schema" value="mysql" />
        <param name="schemaObjectPrefix" value="J_V_PM_" />
        <param name="externalBLOBs" value="false" />
    </PersistenceManager>
</Versioning>
```

```
    <!--
    Cluster Configuration

    This is sample configuration for mysql persistence that can be used for
    clustering Jackrabbit. For other databases, change the  connection,
    credentials, and schema settings.
    -->

    <!--<Cluster id="node_1" syncDelay="5">
        <Journal class="org.apache.jackrabbit.core.journal.DatabaseJournal">
            <param name="revision" value="${rep.home}/revision"/>
            <param name="driver" value="com.mysql.jdbc.Driver"/>
            <param name="url" value="jdbc:mysql://localhost/jcr"/>
            <param name="user" value=""/>
            <param name="password" value=""/>
            <param name="schema" value="mysql"/>
            <param name="schemaObjectPrefix" value="J_C_"/>
        </Journal>
    </Cluster>-->
</Repository>
```

3. **Deploy `webspace.war`.**

   To deploy `webspace.war`, place it under *GlassFish install-dir*`/domains/domain1/autodeploy` and restart GlassFish.

4. **Add some documents through the Document Library portlet. If you see the `lportal` database, the Document Library data is stored in the following tables:**

   - `J_V_PM_BINVAL`
   - `J_V_PM_NODE`
   - `J_V_PM_PROP`
   - `J_V_PM_REFS`

Installing Plugins

Web Space Server comes with two portlets which can handle plugin installation: the Plugin Installer and the Update Manager. The Update Manager helps to determine if you are running the most recent version of a plugin.

You can add the Update Manager portlet to your page by clicking Add Application from the welcome dock. The Update Manager displays which plugins are already installed on the system, what their version numbers are, and whether an update is available.

To install a plugin from the Update Manager, click the Install More Plugins button. It invokes the Plugin Installer portlet, and by default you are on the Portlet Plugins tab. You can install or uninstall the portlets available in the repository. If your server is firewalled, you may not see any

plugins in the repository, and you need to install plugins manually. To install plugins manually, clickthe Upload File tab. You can browse the WAR file for a layout template, portlet, or a theme that you want to install. You can specify the deployment context in a text box for easy identification of the portlet. Click the Install button to install the portlet.

If you do not wish to use the Update Manager or Plugin Installer to deploy plugins, you can also deploy them at the operating system level. The first time Web Space Server starts, it creates a hot deploy folder which is by default created inside the home folder of the user who launched Web Space Server. For example, say that on a Linux system, the user `lportal` was created in order to run Web Space Server. The first time Web Space Server is launched, it will create a folder structure in `/home/lportal/webspace` to house various configuration and administrative data. One of the folders it creates is called `deploy`. If you copy a portlet or theme plugin into this folder, Liferay will deploy it and make it available for use just as though you'd installed it via the Update Manager or Plugin Installer. In fact, this is what the Update Manager and Plugin Installer portlets are doing behind the scenes.

You can change the defaults for this directory structure so that it is stored anywhere you like by modifying the appropriate properties in your `portal-ext.properties` file.

Creating a Custom Plugin Repository

As your enterprise builds its own library of portlets for internal use, you can create your own plugin repository to make it easy to install and upgrade portlets. This will allow different departments running different instances of Web Space Server to share portlets and install them as needed. If you are a software development house, you may wish to create a plugin repository for your own products. Web Space Server makes it easy for you to create your own plugin repository and make it available to others.

You can create your plugin repository using the Software Catalog portlet. This method allows users to upload their plugins to an HTTP server to which they have access. They can then register their plugins with the repository by adding a link to it via the portlet's graphical user interface. Web Space Server will then generate the XML necessary to connect the repository to a Plugin Installer portlet running another instance of Web Space Server. This XML file can then be placed on an HTTP server, and the URL to it can be added to the Plugin Installer, making the portlets in this repository available to the server running Web Space Server.

Using the Software Catalog Portlet

The *Software Catalog* portlet is not an instanceable portlet, which means that each community can have only one instance of the portlet. If you add the portlet to another page in the community, it will hold the same data as the portlet that was first added. Different communities, however, can have different software repositories, so you can host several software repositories on the same instance of Web Space Server if you wish they just have to be in different communities.

The Software Catalog portlet has several tabs. The first tab is labeled Products. The default view of the portlet, when populated with software, displays what plugins are available for install or download. This can be seen in the version on Web Space Server's home page.

The first step in adding a plugin to your software repository is to add a license for your product. A license communicates to users the terms upon which you are allowing them to download and use your software. Click the Licenses tab and then click the Add License button that appears. You will then see a form which allows you to type the title of your license, a URL pointing to the actual license document, and check boxes denoting whether the license is open source, active, or recommended.

When you have finished filling out the form, click the Save button. Your license will be saved. Once you have at least one license in the system, you can begin adding software products to your software catalog. Your next step will be to create the product record in the software catalog portlet. This will register the product in the software catalog and allow you to start adding versions of your software for users to download and/or install directly from their instances of Web Space Server. You will first need to put the `.war` file containing your software on a web server that is accessible without authentication to the users who will be installing your software. If you are creating a software catalog for an internal Intranet, you would place the file on a web server that is available to anyone inside your organization's firewall.

To create the product record in the Software Catalog portlet, click the Products tab, and then click the Add Product button. Fill out the form with information about your product.

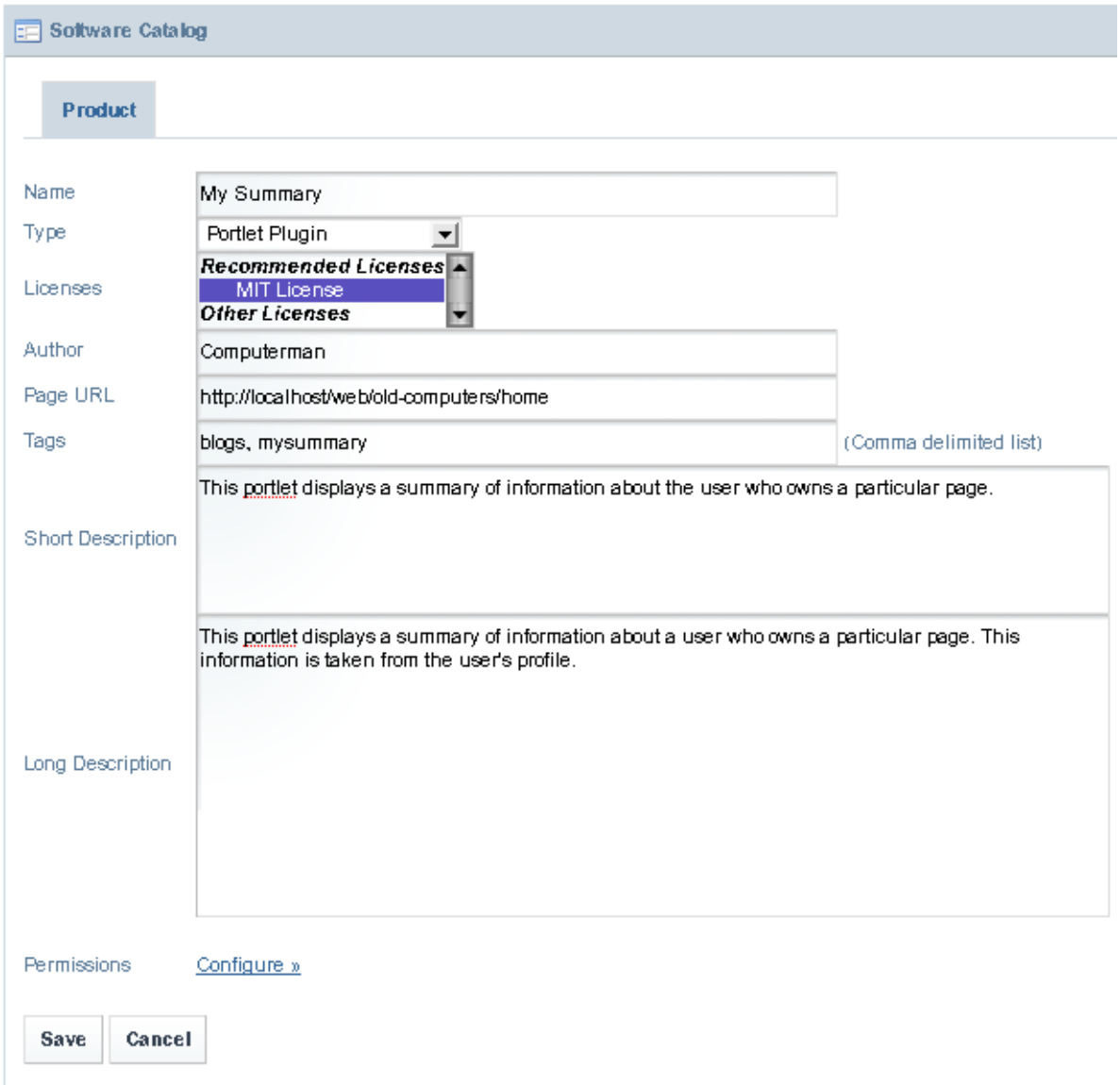

FIGURE 8–1 Adding a Product to the Software Catalog (partial)

Name: The name of your software product.

Type: Select whether this is a portlet or a theme plugin.

Licenses: Select the license(s) under which you are releasing this software.

Author: Type the name of the author of the software.

Page URL: If the software has a home page, type its url here.

Tags: Type any tags you would like added to this software.

Short Description: Type a short description. This will be displayed in the summary table of your software catalog.

Long Description: Type a longer description. This will be displayed on the details page for this software product.

Permissions: Click the Configure link to set permissions for this software product.

Group ID: Type a group ID. A group ID is a name space which usually identifies the company or organization that made the software. For example, use old-computers.

Artifact ID: Type an Artifact ID. The artifact ID is a unique name within the name space for your product. For example, use my-summary-portlet.

Screenshot: Click the Add Screenshot button to add a screenshot of your product for users to view.

When you have finished filling out the form, click the Save button. You will be brought back to the product summary page, and you will see that your product has been added to the repository.

Notice that in the version column, N/A is being displayed. This is because there are not yet any released versions of your product. To make your product downloadable, you need to create a version of your product and point it to the file you uploaded to your HTTP server earlier.

Before you do that, however, you need to add a Framework Version to your software catalog. A Framework version denotes what version of Web Space Server your plugin is designed for and works on. You cannot add a version of your product without linking it to a version of the framework for which it is designed.

Why is this so important? Because as Web Space Server gains more and more features, you may wish to take advantage of those features in future versions of your product, while still keeping older versions of your product available for those who are using older versions of Web Space Server.

So click the Framework Versions tab and then click the Add Framework Version button. Give the framework a name, a URL, and leave the Active check box checked.

Now go back to the Products tab and click your product. You will notice that a message is displayed stating that the product does not have any released versions. Click the Add Product Version button.

Note – It is a must to specify a group ID and artifact ID before you specify a product version. You can specify the group ID and artifact ID for the product from the Product Version page by clicking on the *It is a must to specify a group ID and artifact ID before you specify a product version* link, which appears in the Product Version page if a group ID and artifact ID are not specified for the product.

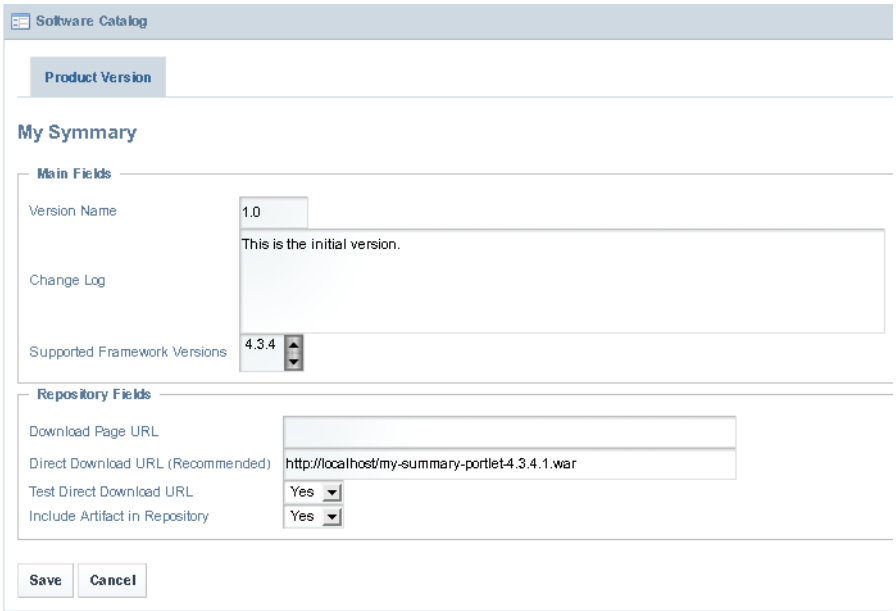

FIGURE 8–2 Adding a Product Version to the Software Catalog

Version Name: Type the version of your product.

Change Log: Type some comments regarding what changed between this version and any previous versions.

Supported Framework Versions: Select the framework version for which your software product is intended.

Download Page URL: If your product has a descriptive web page, type its URL here.

Direct Download URL (Recommended) : Type a direct download link to your software product here. The Plugin Installer portlet will follow this link in order to download your software product.

Include Artifact in Repository: To enable others to use the Plugin Installer portlet to connect to your repository and download your plugin, select *Yes* here.

When you are finished filling out the form, click the Save button. Your product version will be saved, and your product will now be available in the software repository.

◆ ◆ ◆ CHAPTER 9

Configuring Portal Properties

You can configure Web Space Server using a combination of settings which are stored in the database (configured by the use of the various administration portlets) and settings which are stored in properties (text) files. You can modify these files to change the portal's behavior in certain ways. There are a large number of configuration options that can be set, and so this section will have a wide-ranging set of topics. You can first go over the main configuration file, which is stored in <*root-dir*>`/webspace-for-gfv2/var/webspace/war-workspace/customs`, and is called `portal-ext.properties`.

Customizing Web Space Server Using the portal-ext.properties File

Web Space Server's properties files differ from the configuration files of most other products in that changing the default configuration file is discouraged. In fact, the file that contains all of the defaults is stored inside a `.jar` file, making it more difficult to customize. Why is it set up this way? Because Web Space Server uses the concept of overriding the defaults in a separate file, rather than going in and customizing the default configuration file. You can just put the settings you want to customize in your own configuration file, and then the configuration file for your portal is uncluttered and contains only the settings you need. This makes it far easier to determine whether a particular setting has been customized, and it makes the settings more portable across different instances of Web Space Server.

The default configuration file is called `portal.properties`, and it resides inside the `portal-impl.jar` file. This file is readily accessible inside the <*GlassFish home*>`/domains/domain1/application/j2ee-modules/webspace/WEB-INF/lib` folder in Web Space Server. You can see all the files in the `portal-impl.jar` file by unjaring a copy of the file to an external directory. What follows is a brief description of the properties which can go into the `portal-ext.properties` file, thus overriding the corresponding properties in the `portal.properties` file. These are presented in a logical order, not an alphabetical one, as many properties relate to other properties in the system.

Create the `portal-ext.properties` file by placing the properties that you want to override and place it in the *<root-dir>*`/webspace-for-gfv2/var/webspace/war-workspace/customs/webspace/WEB-INF/classes` folder to override that option in `portal.properties`.

Note – If you are using the evaluation bundle, Web Space Server's installed location is *"Glassfish Dir"*`/domains/domain1/application/j2ee-modules/webspace/`.

Properties Override

`Properties Override` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

This property specifies where to get the overridden properties. By default, it is `portal-ext.properties`. Updates should not be made on the original file (`portal.properties`) but on the overridden version of this file. Furthermore, each portal instance can have its own overridden property file following the convention `portal-companyid.properties`.

For example, one read order may be: `portal.properties`, then `portal-ext.properties`, and then `portal-test.properties`.

Examples:

```
include-and-override=portal-ext.properties

include-and-override=portal-${easyconf:companyId}.properties

include-and-override=portal-test.properties
```

You can add additional property files that overwrite the default values by using the `external-properties` system property.

A common example is to keep legacy property values when upgrading to newer versions of Web Space Server.

```
java ... -Dexternal-properties=portal-legacy-4.4.properties
include-and-override=${external-properties}
```

Portal Context

`Portal Context` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

This specifies the path of the portal servlet context.

Set this property if you deploy the portal to another path besides root.

Examples:

```
portal.ctx=/
portal.ctx=/portal
```

Resource Repositories Root

`Resource Repositories Root` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Specifies the default root path for various repository and resource paths. Under this path several directories are created for the hot deploy feature, JCR, and so on.

Examples:

```
resource.repositories.root=<root-dir>/webspace-for-gfv2/var/webspace/war-workspace
```

Schema

`Schema` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true to automatically create tables and populate with default data if the database is empty.

```
schema.run.enabled=true
```

Set this to true to populate with the minimal amount of data. Set this to false to populate with a larger amount of sample data.

```
schema.run.minimal=true
```

Upgrade

`Upgrade` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that implement `com.liferay.portal.upgrade.UpgradeProcess`. These classes runs on startup to upgrade older data to match with the latest version.

```
upgrade.processes=\
com.liferay.portal.upgrade.UpgradeProcess_4_3_0,\
com.liferay.portal.upgrade.UpgradeProcess_4_3_1,\
com.liferay.portal.upgrade.UpgradeProcess_4_3_2,\
com.liferay.portal.upgrade.UpgradeProcess_4_3_3,\
com.liferay.portal.upgrade.UpgradeProcess_4_3_4,\
com.liferay.portal.upgrade.UpgradeProcess_4_3_5,\
com.liferay.portal.upgrade.UpgradeProcess_4_4_0,\
com.liferay.portal.upgrade.UpgradeProcess_5_0_0,\
com.liferay.portal.upgrade.UpgradeProcess_5_1_0
```

Verify

`Verify` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that implement `com.liferay.portal.integrity.VerifyProcess`. These classes runs on startup to verify and fix any integrity problems found in the database.

```
verify.processes=com.liferay.portal.verify.VerifyProcessSuite
```

Specify the frequency for verifying the integrity of the database.

Constants in VerifyProcess:

public static final int ALWAYS = -1;

public static final int NEVER = 0;

public static final int ONCE = 1;

```
verify.frequency=1
```

Auto Deploy

`Auto Deploy` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that implement `com.liferay.portal.kernel.deploy.auto.AutoDeployListener`. These classes are used to process the auto deployment of WARs.

```
auto.deploy.listeners=\
com.liferay.portal.deploy.auto.LayoutTemplateAutoDeployListener,\
com.liferay.portal.deploy.auto.PortletAutoDeployListener,\
com.liferay.portal.deploy.auto.ThemeAutoDeployListener,\
com.liferay.portal.deploy.auto.WebAutoDeployListener,\
com.liferay.portal.deploy.auto.exploded.tomcat.LayoutTemplateExplodedTomcatListener,\
com.liferay.portal.deploy.auto.exploded.tomcat.PortletExplodedTomcatListener,\
com.liferay.portal.deploy.auto.exploded.tomcat.ThemeExplodedTomcatListener
```

Set the following to true to enable auto deploy of layout templates, portlets, and themes.

```
auto.deploy.enabled=true
```

Set the directory to scan for layout templates, portlets, and themes to auto deploy.

```
auto.deploy.deploy.dir=${resource.repositories.root}/deploy
```

Set the directory where auto deployed WARs are copied to. The application server or servlet container must know to listen on that directory.

Different containers have different hot deploy paths. For example, Tomcat listens on `${catalina.base}/webapps` whereas JBoss listens on `${jboss.server.home.dir}/deploy`. Set a blank directory to automatically use the application server specific directory.

Examples:

```
auto.deploy.dest.dir=
auto.deploy.default.dest.dir=../webapps
auto.deploy.geronimo.dest.dir=${org.apache.geronimo.base.dir}/deploy
auto.deploy.geronimo-jetty.dest.dir=${org.apache.geronimo.base.dir}/deploy
auto.deploy.geronimo-tomcat.dest.dir=${org.apache.geronimo.base.dir}/deploy
auto.deploy.glassfish.dest.dir=${com.sun.aas.instanceRoot}/autodeploy
auto.deploy.glassfish-tomcat.dest.dir=${com.sun.aas.instanceRoot}/autodeploy
auto.deploy.jboss-jetty.dest.dir=${jboss.server.home.dir}/deploy
auto.deploy.jboss-tomcat.dest.dir=${jboss.server.home.dir}/deploy
auto.deploy.jetty.dest.dir=${jetty.home}/webapps
auto.deploy.jonas-jetty.dest.dir=${jonas.base}/webapps/autoload
auto.deploy.jonas-tomcat.dest.dir=${jonas.base}/webapps/autoload
auto.deploy.tomcat.dest.dir=${catalina.base}/webapps
auto.deploy.weblogic.dest.dir=${env.DOMAIN_HOME}/autodeploy
```

Set the interval in milliseconds on how often to scan the directory for changes.

```
auto.deploy.interval=10000
```

Set the number of attempts to deploy a file before blacklisting it.

```
auto.deploy.blacklist.threshold=10
```

Set the following to true if deployed WARs are unpacked. Set this to false if your application server has concurrency issues with deploying large WARs.

```
auto.deploy.unpack.war=true
```

Set the following to true if you want the deployer to rename `portlet.xml` to `portlet-custom.xml`. This is only needed when deploying the portal on WebSphere 6.1.x with a version before 6.1.0.7 because WebSphere's portlet container tries to process a portlet at the same time that Web Space Server is trying to process a portlet.

Note that according to IBM, on versions after 6.1.0.9, you need to add a context parameter to the `web.xml` descriptor in your portlet application called `com.ibm.websphere.portletcontainer.PortletDeploymentEnabled` and set it to false. This parameter causes WebSphere's built-in portlet container to ignore your portlet application when it is deployed, enabling Web Space Server to pick it up.

```
auto.deploy.custom.portlet.xml=false
```

Set this to 1 if you are using JBoss' `PrefixDeploymentSorter`. This appends a 1 in front of your WAR name. For example, if you are deploying a portlet called `testportlet.war`, it will deploy it to `1test-portlet.war`. JBoss now knows to load this portlet after the other WARs have loaded; however, it will remove the 1 from the context path.

Modify `/server/default/conf/jboss-service.xml`.

See `org.jboss.deployment.scanner.PrefixDeploymentSorter`.

```
auto.deploy.jboss.prefix=1
```

Set the path to Tomcat's configuration directory. This property is used to auto deploy exploded WARs. Tomcat context XML files found in the auto deploy directory are copied to Tomcat's configuration directory. The context XML file must have a docBase attribute that points to a valid WAR directory.

```
auto.deploy.tomcat.conf.dir=../conf/Catalina/localhost
```

Set the path to Tomcat's global class loader. This property is only used by Tomcat in a standalone environment.

```
auto.deploy.tomcat.lib.dir=../common/lib/ext
```

Set the URLs of Libraries that might be needed to download during the auto deploy process.

```
library.download.url.quercus.jar=http://lportal.svn.sourceforge.net/viewvc/*
checkout*/lportal/portal/trunk/lib/development/quercus.jar
library.download.url.resin-util.jar=http://lportal.
svn.sourceforge.net/viewvc/*checkout*/lportal/portal/trunk/lib/development/
resin-util.jar
library.download.url.script-10.jar=http://lportal.svn.sourceforge.net/viewvc
/*checkout*/lportal/portal/trunk/lib/development/script-10.jar
```

Hot Deploy

`Hot Deploy` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that implement `com.liferay.portal.kernel.deploy.hot.HotDeployListener`. These classes are used to process the deployment and undeployment of WARs at runtime.

Note – `PluginPackageHotDeployListener` must always be first.

```
hot.deploy.listeners=\
com.liferay.portal.deploy.hot.PluginPackageHotDeployListener,\
com.liferay.portal.deploy.hot.HookHotDeployListener,\
com.liferay.portal.deploy.hot.LayoutTemplateHotDeployListener,\
com.liferay.portal.deploy.hot.PortletHotDeployListener,\
com.liferay.portal.deploy.hot.ThemeHotDeployListener,\
com.liferay.portal.deploy.hot.ThemeLoaderHotDeployListener
```

Hot Undeploy

`Hot Undeploy` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true to enable undeploying plugins.

```
hot.undeploy.enabled=true
```

Set the undeploy interval to the number of milliseconds the system should wait for the undeploy process to finish.

```
hot.undeploy.interval=0
```

Set the following to true to undeploy a plugin before deploying a new version. This property is only used if the property `hot.undeploy.enabled` is set to true.

```
hot.undeploy.on.redeploy=false
```

Plugin

`Plugin` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited supported plugin types.

```
plugin.types=portlet,theme,layout-template,web
```

Input a list of Liferay plugin repositories separated by \n characters.

```
plugin.repositories.trusted=http://plugins.liferay.com/official
plugin.repositories.untrusted=http://plugins.liferay.com/community
```

Set this property to false to avoid receiving on screen notifications when there is a new version of an installed plugin.

```
plugin.notifications.enabled=true
```

Input a list of plugin packages IDs separated by \n characters. Administrators won't be notified when a new version of these plugins are available. The IDs are of the form groupID/artifactID. You can also end the ID with an asterisk to match any ID that start with the previous character.

```
plugin.notifications.packages.ignored=liferay/sample-jsp-portlet
```

Portlet

`Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this property for the portlet container implementation to use. The default implementation is the internal implementation and provides for the best backwards compatibility. The Sun implementation provides more features and will be the recommended implementation in the future.

```
portlet.container.impl=internal
#portlet.container.impl=sun
```

Set this property to define the default virtual path for all hot deployed portlets. See `liferay-portlet-app_4_3_0.dtd` and the virtual-path element for more information.

```
portlet.virtual.path=
```

Theme

Theme is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this property to true to load the theme's merged CSS files for faster loading for production.

Set this property to false for easier debugging for development. You can also disable fast loading by setting the URL parameter `css_fast_load` to 0.

```
theme.css.fast.load=true
```

Set the theme's shorcut icon.

```
theme.shortcut.icon=liferay.ico
```

Set this property to set the default virtual path for all hot deployed themes. See `liferay-look-and-feel_4_3_0.dtd` and the virtual-path element for more information.

```
theme.virtual.path=
```

Set this with an absolute path to specify where imported theme files from a LAR will be stored. This path will override the file-storage path specified in `liferay-themeloader. xml`.

```
theme.loader.storage.path=
```

Themes can be imported via LAR files. Set this to true if imported themes should use a new theme ID on every import. This will ensure that a copy of the old theme is preserved in the theme loader storage path. However, this also means that a lot of themes that are no longer used remain in the file system. It is recommended that you set this to false.

```
theme.loader.new.theme.id.on.import=false
```

Set this to true to decorate portlets by default.

```
theme.portlet.decorate.default=true
```

Resource Actions

Resource Actions is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited resource action configurations that will be read from the class path.

```
resource.actions.configs=resource-actions/default.xml
```

Model Hints

`Model Hints` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited model hints configurations.

```
model.hints.configs=\
META-INF/portal-model-hints.xml,\
META-INF/workflow-model-hints.xml,\
META-INF/ext-model-hints.xml,\
META-INF/portlet-model-hints.xml
```

Spring

`Spring` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited Spring configurations. These will be loaded after the bean definitions specified in the `contextConfigLocation` parameter in `web.xml`.

```
spring.configs=\
META-INF/data-source-spring.xml,\
META-INF/misc-spring.xml,\
META-INF/counter-spring.xml,\
META-INF/documentlibrary-spring.xml,\
META-INF/lock-spring.xml,\
META-INF/mail-spring.xml,\
META-INF/portal-spring.xml,\
META-INF/portal-spring-jcr.xml,\
META-INF/ext-spring.xml
```

Set the bean name for the Liferay data source.

```
spring.hibernate.data.source=liferayDataSource
```

Set the bean name for the Liferay session factory.

```
spring.hibernate.session.factory=&liferaySessionFactory
```

Hibernate

`Hibernate` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Many of the following properties should only be customized if you have advanced knowledge of Hibernate. They map to various Hibernate configuration options which themselves have detailed documentation. Please see http://www.hibernate.org for more information.

Input a list of comma-delimited Hibernate configurations.

```
hibernate.configs=\
META-INF/counter-hbm.xml,\
META-INF/mail-hbm.xml,\
META-INF/portal-hbm.xml,\
META-INF/ext-hbm.xml
```

Use the Liferay SQL dialect because it will automatically detect the proper SQL dialect based on your connection URL.

```
hibernate.dialect=com.liferay.portal.dao.orm.hibernate.DynamicDialect
```

Set the Hibernate connection release mode. You should not modify this unless you know what you're doing. The default setting works best for Spring managed transactions. See the method `buildSessionFactory` in class `org.springframework.orm.hibernate3.LocalSessionFactoryBean` and search for the phrase "on_close" to understand how this works.

```
hibernate.connection.release_mode=on_close
```

Set the Hibernate cache provider. Ehcache is recommended in a clustered environment. See the property `net.sf.ehcache.configurationResourceName` for detailed configuration.

Examples:

```
hibernate.cache.provider_class=com.liferay.portal.dao.orm.hibernate.EhCacheProvider
hibernate.cache.provider_class=net.sf.hibernate.cache.HashtableCacheProvider
hibernate.cache.provider_class=com.liferay.portal.dao.orm.hibernate.OSCacheProvider
```

This property is used if Hibernate is configured to use Ehcache's cache provider.

```
net.sf.ehcache.configurationResourceName=/ehcache/hibernate.xml
```

Use the following ehcache configuration in a clustered environment.

```
net.sf.ehcache.configurationResourceName=/ehcache/hibernate-clustered.xml
```

Set other Hibernate cache settings.

```
hibernate.cache.use_query_cache=true
hibernate.cache.use_second_level_cache=true
hibernate.cache.use_minimal_puts=true
hibernate.cache.use_structured_entries=false
```

Use these properties to disable Hibernate caching. This may be a performance hit; you may only want to use these properties for diagnostic purposes.

```
hibernate.cache.provider_class=org.hibernate.cache.NoCacheProvider
hibernate.cache.use_query_cache=false
hibernate.cache.use_second_level_cache=false
```

Set the JDBC batch size to improve performance. If you're using Oracle 9i, however, you must set the batch size to 0 as a workaround for a hanging bug in the Oracle driver. See http://support.liferay.com/browse/LEP-1234 for more information.

Examples:

```
hibernate.jdbc.batch_size=20
hibernate.jdbc.batch_size=0
```

Set other miscellaneous Hibernate properties.

```
hibernate.jdbc.use_scrollable_resultset=true
hibernate.bytecode.use_reflection_optimizer=true
hibernate.show_sql=false
```

Use the classic query factory until WebLogic and Hibernate 3 can get along. See http://www . hibernate .org/250 . html #A23 for more information.

```
hibernate.query.factory_class=org.hibernate.hql.classic.ClassicQueryTranslatorFactory
```

Ehcache

`Ehcache` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the classpath to the location of the Ehcache config file for internal caches. Edit the file specified in the property `ehcache.multi-vm.config.location` to enable clustered cache.

```
ehcache.single.vm.config.location=/ehcache/liferay-single-vm.xml
ehcache.multi.vm.config.location=/ehcache/liferay-multi-vm.xml
```

Use the following in a clustered environment.

```
ehcache.multi.vm.config.location=/ehcache/liferay-multi-vm-clustered.xml
```

Commons Pool

`Commons Pool` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Commons Pool is used to pool and recycle objects that are used very often. This can help lower memory usage. There is some debate over the synchronization issues related to Commons Pool. Set this to false to disable object pooling.

```
commons.pool.enabled=false
```

JavaScript

`JavaScript` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set a list of JavaScript files that will be loaded programmatically in `/html/common/themes/top_js.jsp`.

There are two lists of files specified in the properties `javascript.barebone.files` and `javascript.everything.files`.

As the name suggests, the barebone list is a trimmed down version of the everything list whereas the everything list is a list of all loaded JavaScript files.

The two lists of files exist for performance reasons because unauthenticated users usually do not utilize all the JavaScript that is available. See the property `javascript.barebone.enabled` for more information on the logic of when the barebone list is used and when the everything list is used and how to customize that logic.

The list of files are also merged and packed for further performance improvements. See the property `javascript.fast.load` for more details.

Specify the list of barebone files.

The ordering of the JavaScript files is important. Specifically, all JQuery scripts should go first.

The Liferay scripts are grouped in such a way that the first grouping denotes utility scripts that are used by the second and third groups. The second grouping denotes utility classes that rely on the first group, but does not rely on the second or third group. The third grouping denotes modules that rely on the first and second group.

```
javascript.barebone.files=\
\
#
# JQuery scripts
#
\
jquery/jquery.js,\
jquery/cookie.js,\
jquery/hover_intent.js,\
jquery/j2browse.js,\
jquery/livequery.js,\
jquery/ui.core.js,\
jquery/ui.datepicker.js,\
jquery/ui.dialog.js,\
\
#
# Miscellaneous scripts
#
\
misc/class.js,\
misc/swfobject.js,\
\
#
# Liferay base utility scripts
#
\
liferay/liferay.js,\
liferay/browser.js,\
liferay/util.js,\
\
#
# Liferay utility scripts
#
\
liferay/events.js,\
liferay/popup.js,\
liferay/portal.js,\
liferay/portlet.js,\
\
#
# Liferay modules
#
\
liferay/dock.js,\
liferay/menu.js
#
# Specify the list of everything files.
#
```

```
javascript.everything.files=\
\
#
# JQuery scripts
#
\
jquery/jquery.js,\
jquery/cookie.js,\
jquery/form.js,\
jquery/hover_intent.js,\
jquery/j2browse.js,\
jquery/jeditable.js,\
jquery/json.js,\
jquery/livequery.js,\
jquery/media.js,\
jquery/ui.core.js,\
jquery/ui.accordion.js,\
jquery/ui.dialog.js,\
jquery/ui.draggable.js,\
jquery/ui.droppable.js,\
jquery/ui.resizable.js,\
jquery/ui.selectable.js,\
jquery/ui.slider.js,\
jquery/ui.sortable.js,\
jquery/ui.tabs.js,\
jquery/effects.core.js,\
jquery/effects.blind.js,\
jquery/effects.bounce.js,\
jquery/effects.clip.js,\
jquery/effects.drop.js,\
jquery/effects.explode.js,\
jquery/effects.fold.js,\
jquery/effects.highlight.js,\
jquery/effects.pulsate.js,\
jquery/effects.scale.js,\
jquery/effects.shake.js,\
jquery/effects.slide.js,\
jquery/effects.transfer.js,\
jquery/ui.color_picker.js,\
jquery/ui.autocomplete.js,\
\
#
# Miscellaneous scripts
#
\
misc/class.js,\
misc/swfobject.js,\
\
```

```
Advanced Liferay Configuration
#
# Liferay base utility scripts
#
\
liferay/liferay.js,\
liferay/browser.js,\
liferay/util.js,\
liferay/language.js,\
liferay/layout.js,\
\
#
# Liferay utility scripts
#
\
liferay/events.js,\
liferay/popup.js,\
liferay/portal.js,\
liferay/portlet.js,\
\
#
# Liferay modules
#
\
liferay/auto_fields.js,\
liferay/color_picker.js,\
liferay/dock.js,\
liferay/dynamic_select.js,\
liferay/layout_configuration.js,\
liferay/layout_exporter.js,\
liferay/menu.js,\
liferay/notice.js,\
liferay/navigation.js,\
liferay/session.js,\
liferay/tags_selector.js,\
liferay/upload.js
```

Set this property to false to always load JavaScript files listed in the property `javascript.everything.files`. Set this to true to sometimes load `javascript.barebone.files` and sometimes load `javascript.everything.files`.

The default logic is coded in `com.liferay.portal.events.ServicePreAction` in such a way that unauthenticated users get the barebone list of JavaScript files whereas authenticated users get the everything list of JavaScript files.

```
javascript.barebone.enabled=true
```

Set this property to true to load the packed version of files listed in the properties `javascript.barebone.files` or `javascript.everything.files`.

Set this property to false for easier debugging for development. You can also disable fast loading by setting the URL parameter `js_fast_load` to 0.

```
javascript.fast.load=true
```

Set the following to true to enable the display of JavaScript logging.

```
javascript.log.enabled=false
```

SQL Data

`SQL Data` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the default SQL IDs for common objects.

```
sql.data.com.liferay.portal.model.Country.country.id=19
sql.data.com.liferay.portal.model.Region.region.id=5
sql.data.com.liferay.portal.model.ListType.account.address=10000
sql.data.com.liferay.portal.model.ListType.account.email.address=10004
sql.data.com.liferay.portal.model.ListType.contact.email.address=11003
sql.data.com.liferay.portal.model.ListType.organization.status=12017
```

Company

`Company` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

This sets the default web ID. Omni admin users must belong to the company with this web ID.

```
company.default.web.id=liferay.com
```

The portal can authenticate users based on their email address, screen name, or user ID.

```
company.security.auth.type=emailAddress
company.security.auth.type=screenName
company.security.auth.type=userId
```

Set this to true to ensure users log in with https.

```
company.security.auth.requires.https=false
```

Set the following to true to allow users to select the remember me feature to automatically log in to the portal.

```
company.security.auto.login=true
```

Set the following to the maximum age (in number of seconds) of the browser cookie that enables the remember me feature. A value of 31536000 signifies a lifespan of one year. A value of -1 signifies a lifespan of a browser session.

Rather than setting this to 0, set the property `company.security.auto.login` to false to disable the remember me feature.

```
company.security.auto.login.max.age=31536000
```

Set the following to true to allow users to ask the portal to send them their password.

```
company.security.send.password=true
```

Set the following to true to allow strangers to create accounts and register themselves on the portal.

```
company.security.strangers=true
```

Set the following to true if strangers can create accounts with email addresses that match the company mail suffix. This property is not used unless `company.security.strangers` is also set to true.

```
company.security.strangers.with.mx=true
```

Set the following to true if strangers who create accounts need to be verified via email.

```
company.security.strangers.verify=false
```

Set the following to true to allow community administrators to use their own logo instead of the enterprise logo.

```
company.security.community.logo=true
```

Users

`Users` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to false if users cannot be deleted.

```
users.delete=true
```

Set the following to true to always autogenerate user screen names even if the user gives a specific user screen name.

```
users.screen.name.always.autogenerate=false
```

Input a class name that extends `com.liferay.portal.security.auth.ScreenNameGenerator`. This class will be called to generate user screen names.

```
users.screen.name.generator=com.liferay.portal.security.auth.ScreenNameGenerator
```

Input a class name that extends `com.liferay.portal.security.auth.ScreenNameValidator`. This class will be called to validate user IDs.

Examples:

```
users.screen.name.validator=com.liferay.portal.security.auth.ScreenNameValidator
users.screen.name.validator=com.liferay.portal.security.auth.LiberalScreenNameValidator
```

Set the maximum file size for user portraits. A value of 0 for the maximum file size can be used to indicate unlimited file size. However, the maximum file size allowed is set in property `com.liferay.portal.upload.UploadServletRequestImpl.max.size` found in `system.properties`.

```
users.image.max.size=307200
```

Groups and Roles

`Groups and Roles` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited system group names that will exist in addition to the standard system groups. When the server starts, the portal checks to ensure all system groups exist. Any missing system group will be created by the portal.

```
system.groups=
```

Input a list of comma-delimited system role names that will exist in addition to the standard system roles. When the server starts, the portal checks to ensure all system roles exist. Any missing system role will be created by the portal.

The standard system roles are: Administrator, Guest, Power User, and User. These roles cannot be removed or renamed.

```
system.roles=
```

Set the description of the Administrator system role.

```
system.role.Administrator.description=Administrators are super users who can
do anything.
```

Set the description of the Guest system role.

```
system.role.Guest.description=Unauthenticated users always have this role.
```

Set the description of the Power User system role.

```
system.role.Power.User.description=Power Users have their own public and
private pages.
```

Set the description of the User system role.

```
system.role.User.description=Authenticated users should be assigned this
role.
```

Input a list of comma-delimited system community role names that will exist in addition to the standard system community roles. When the server starts, the portal checks to ensure all system community roles exist. Any missing system community role will be created by the portal.

The standard system community roles are: Community Administrator, Community Member, and Community Owner. These roles cannot be removed or renamed.

```
system.community.roles=
```

Set the description of the Community Administrator system community role.

```
system.community.role.Community.Administrator.description=Community Administrators
are super users of their community but cannot make other users into
Community Administrators.
```

Set the description of the Community Member system community role.

```
system.community.role.Community.Member.description=All users who belong to a
community have this role within that community.
```

Set the description of the Community Owner system community role.

```
system.community.role.Community.Owner.description=Community Owners are super
users of their community and can assign community roles to users.
```

Input a list of comma-delimited system organization role names that will exist in addition to the standard system organization roles. When the server starts, the portal checks to ensure all system organization roles exist. Any missing system organization role will be created by the portal.

The standard system organization roles are: Organization Administrator, Organization Member, and Organization Owner. These roles cannot be removed or renamed.

```
system.organization.roles=
```

Set the description of the Organization Administrator system organization role.

```
system.organization.role.Organization.Administrator.description=Organization
Administrators are super users of their organization but cannot make other
users into Organization Administrators.
```

Set the description of the Organization Member system organization role.

```
system.organization.role.Organization.Member.description=All users who belong
to a organization have this role within that organization.
```

Set the description of the Organization Owner system organization role.

```
system.organization.role.Organization.Owner.description=Organization Owners
are super users of their organization and can assign organization roles to
users.
```

Omni admin users can administer the portal's core functionality: gc, shutdown, and so on. Omni admin users must belong to the default company.

Multiple portal instances might be deployed on one application server, and not all of the administrators should have access to this core functionality. Input the IDs of users who are omniadmin users.

Leave this field blank if users who belong to the right company and have the Administrator role are allowed to administer the portal's core functionality.

```
omniadmin.users=
```

Set the following to true if all users are required to agree to the terms of use.

```
terms.of.use.required=true
```

Organizations

`Organizations` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true if organizations must have an associated country.

```
organizations.country.required=true
```

Languages and Time Zones

`Languages and Time Zones` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Specify the available locales. Messages corresponding to a specific language are specified in properties files with file names matching that of `content/Language_*.properties`. These values can also be overridden in properties files with file names matching that of `content/Language-ext_*.properties`. Use a comma to separate each entry.

All locales must use UTF-8 encoding.

See the following links to specify language and country codes:

http://ftp.ics.uci.edu/pub/ietf/http/related/iso639.txt

http://userpage.chemie.fu-berlin.de/diverse/doc/ISO_3166.html

```
locales=ar_SA,ca_AD,ca_ES,zh_CN,zh_TW,cs_CZ,nl_NL,en_US,fi_FI,fr_FR,de_DE,el
_GR,hu_HU,it_IT,ja_JP,ko_KR,fa_IR,pt_BR,ru_RU,es_ES,sv_SE,tr_TR,vi_VN
```

Set the following to true if unauthenticated users get their preferred language from the Accept-Language header. Set the following to false if unauthenticated users get their preferred language from their company.

```
locale.default.request=false
```

Specify the available time zones. The specified IDs must match those from the class `java.util.TimeZone`.

```
time.zones=\
Pacific/Midway,\
Pacific/Honolulu,\
America/Anchorage,\
America/Los_Angeles,\
America/Denver,\
America/Chicago,\
America/New_York,\
America/Puerto_Rico,\
America/St_Johns,\
America/Sao_Paulo,\
America/Noronha,\
Atlantic/Azores,\
UTC,\
Europe/Lisbon,\
Europe/Paris,\
Europe/Istanbul,\
```

```
Asia/Jerusalem,\
Asia/Baghdad,\
Asia/Tehran,\
Asia/Dubai,\
Asia/Kabul,\
Asia/Karachi,\
Asia/Calcutta,\
Asia/Katmandu,\
Asia/Dhaka,\
Asia/Rangoon,\
Asia/Saigon,\
Asia/Shanghai,\
Asia/Tokyo,\
Asia/Seoul,\
Australia/Darwin,\
Australia/Sydney,\
Pacific/Guadalcanal,\
Pacific/Auckland,\
Pacific/Enderbury,\
Pacific/Kiritimati
```

Look and Feel

`Look and Feel` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to false if the system does not allow users to modify the look and feel.

```
look.and.feel.modifiable=true
```

Set the default layout template ID.

```
default.layout.template.id=2_columns_ii
```

Set the default theme ID for regular themes.

```
default.regular.theme.id=classic
```

Set the default color scheme ID for regular themes.

```
default.regular.color.scheme.id=01
```

Set the default theme ID for wap themes.

```
default.wap.theme.id=mobile
```

Set the default color scheme ID for wap themes.

```
default.wap.color.scheme.id=01
```

Set the following to true if you want a change in the theme selection of the public or private group to automatically be applied to the other (that is, if public and private group themes should always be the same).

```
theme.sync.on.group=false
```

Request

`Request` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Portlets that have been configured to use private request attributes in `liferayportlet.xml` may still want to share some request attributes. This property allows you to configure which request attributes will be shared.

Set a comma-delimited list of attribute names that will be shared when the attribute name starts with one of the specified attribute names. For example, if you set the value to *hello_*, *world_*, then all attribute names that start with *hello_* or *world_* will be shared.

```
request.shared.attributes=LIFERAY_SHARED_
```

Session

`Session` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Specify the number of minutes before a session expires. This value is always overridden by the value set in `web.xml`.

```
session.timeout=30
```

Specify the number of minutes before a warning is sent to the user informing the user of the session expiration. Specify 0 to disable any warnings.

```
session.timeout.warning=1
```

Set the auto-extend mode to true to avoid having to ask the user whether to extend the session or not. Instead it will be automatically extended. The purpose of this mode is to keep the session open as long as the user browser is open and with a portal page loaded. It is recommended to use this setting along with a smaller session.timeout, such as 5 minutes for better performance.

```
session.timeout.auto.extend=false
```

Set this to true if the user is redirected to the default page when the session expires.

```
session.timeout.redirect.on.expire=false
```

Portlets that have been configured to use private session attributes in `liferay-portlet.xml` may still want to share some session attributes. This property allows you to configure which session attributes will be shared. Set a comma-delimited list of attribute names that will be shared when the attribute name starts with one of the specified attribute names. For example, if you set the value to *hello_*, *world_*, then all attribute names that start with *hello_* or *world_* will be shared.

Note that this property is used to specify the sharing of session attributes from the portal to the portlet. This is not used to specify session sharing between portlet WARs or from the portlet to the portal.

```
session.shared.attributes=org.apache.struts.action.LOCALE,COMPANY_,USER_,LIF
ERAY_SHARED_
```

Set this to false to disable all persistent cookies. Features like automatically logging in will not work.

```
session.enable.persistent.cookies=true
```

The login process sets several cookies if persistent cookies are enabled. Set this property to set the domain of those cookies.

```
session.cookie.domain=
```

Set the following to true to invalidate the session when a user logs into the portal. This helps prevents phishing. Set this to false if you need the guest user and the authenticated user to have the same session.

```
session.enable.phishing.protection=true
```

Set the following to true to test whether users have cookie support before allowing them to sign in. This test will always fail if tck.url is set to true because that property disables session cookies.

```
session.test.cookie.support=true
```

Set the following to true to disable sessions. Doing this will use cookies to remember the user across requests. This is useful if you want to scale very large sites where the user may be sent to a different server for each request. The drawback to this approach is that you must not rely on the API for sessions provided by the servlet and portlet specs.

This feature is only available for Tomcat and requires that you set Tomcat's Manager class to `com.liferay.support.tomcat.session.SessionLessManagerBase`.

```
session.disabled=false
```

Input a list of comma-delimited class names that extend `com.liferay.portal.struts.SessionAction`. These classes will run at the specified event.

```
#
# Servlet session create event
#
servlet.session.create.events=com.liferay.portal.events.SessionCreateAction
#
# Servlet session destroy event
#
servlet.session.destroy.events=com.liferay.portal.events.SessionDestroy-
Action
```

Set the following to true to track user clicks in memory for the duration of a user's session. Setting this to true allows you to view all live sessions in the Admin portlet.

```
session.tracker.memory.enabled=true
```

Set the following to true to track user clicks in the database after a user's session is invalidated. Setting this to true allows you to generate usage reports from the database. Use this cautiously because this will store a lot of usage data.

```
session.tracker.persistence.enabled=false
```

Set the following to true to convert the tracked paths to friendly URLs.

```
session.tracker.friendly.paths.enabled=false
```

Provide a list of comma-delimited paths that should not be tracked.

```
session.tracker.ignore.paths=\
/portal/css_cached,\
/portal/javascript_cached,\
/portal/render_portlet,\
\
/document_library/get_file
```

JASS

`JASS` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to false to disable JAAS security checks. Disabling JAAS speeds up login. JAAS must be disabled if administrators are to be able to impersonate other users.

```
portal.jaas.enable=false
```

By default, `com.liferay.portal.security.jaas.PortalLoginModule` loads the correct JAAS login module based on what application server or servlet container the portal is deployed on. Set a JAAS implementation class to override this behavior.

```
portal.jaas.impl=
```

The JAAS process may pass in an encrypted password and the authentication will only succeed if there is an exact match. Set this property to false to relax that behavior so the user can input an unencrypted password.

```
portal.jaas.strict.password=false
```

Set the following to true to enable administrators to impersonate other users. JAAS must also be disabled for this feature to work.

```
portal.impersonation.enable=true
```

LDAP

`LDAP` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the values used to connect to a LDAP store.

```
ldap.factory.initial=com.sun.jndi.ldap.LdapCtxFactory
ldap.base.provider.url=ldap://localhost:10389
ldap.base.dn=dc=example,dc=com
ldap.security.principal=uid=admin,ou=system
ldap.security.credentials=secret
ldap.referral=follow
```

Settings for `com.liferay.portal.security.auth.LDAPAuth` can be configured from the Admin portlet. It provides out of the box support for Apache Directory Server, Microsoft Active Directory Server, Novell eDirectory, and OpenLDAP. The default settings are for Apache Directory Server.

The `LDAPAuth` class must be specified in the property `auth.pipeline.pre` to be executed.

Encryption is implemented by `com.liferay.util.Encryptor.provider.class` in `system.properties`.

```
ldap.auth.enabled=false
ldap.auth.required=false
```

Set either bind or password-compare for the LDAP authentication method. Bind is preferred by most vendors so that you don't have to worry about encryption strategies.

```
ldap.auth.method=bind
ldap.auth.method=password-compare
```

Set the password encryption to used to compare passwords if the property `ldap.auth.method` is set to password-compare.

```
ldap.auth.password.encryption.algorithm=
ldap.auth.password.encryption.algorithm.types=MD5,SHA
```

Active Directory stores information about the user account as a series of bit fields in the `UserAccountControl` attribute.

If you want to prevent disabled accounts from logging into the portal you need to use a search filter similar to the following:

```
(&(objectclass=person)(userprincipalname=@email_address@)(!(UserAccountControl:
1.2.840.113556.1.4.803:=2)))
```

See the following links:

http://support.microsoft.com/kb/305144/

http://support.microsoft.com/?kbid=269181

```
ldap.auth.search.filter=(mail=@email_address@)
```

You can write your own class that extends `com.liferay.portal.security.ldap.AttributesTransformer` to transform the LDAP attributes before a user or group is imported to the LDAP store.

```
ldap.attrs.transformer.impl=com.liferay.portal.security.ldap.Attributes-
Transformer
```

You can write your own class that extends `com.liferay.portal.security.ldap.LDAPUser` to customize the behavior for exporting portal users to the LDAP store.

```
ldap.user.impl=com.liferay.portal.security.ldap.LDAPUser
```

When a user is exported to LDAP and the user does not exist, the user will be created with the following default object classes.

```
ldap.user.default.object.classes=top,person,inetOrgPerson,organizationalPerson
```

When importing and exporting users, the portal will use this mapping to connect LDAP user attributes and portal user variables.

```
ldap.user.mappings=screenName=cn\npassword=userPassword\nemailAddress=mail\n
firstName=givenName\nlastName=sn\njobTitle=title\ngroup=groupMembership
```

When importing groups, the portal will use this mapping to connect LDAP group attributes and portal user group variables.

```
ldap.group.mappings=groupName=cn\ndescription=description\nuser=uniqueMember
```

Settings for importing users and groups from LDAP to the portal.

```
ldap.import.enabled=false
ldap.import.on.startup=false
ldap.import.interval=10
ldap.import.user.search.filter=(objectClass=inetOrgPerson)
ldap.import.group.search.filter=(objectClass=groupOfUniqueNames)
```

Set either user or group for import method. If set to user, portal will import all users and the groups associated with those users. If set to group, the portal import all groups and the users associated those groups.

This value should be set based on how your LDAP server stores group membership information.

```
ldap.import.method=user
ldap.import.method=group
```

Settings for exporting users from the portal to LDAP. This allows users to modify their first name, last name, and so on in the portal and have that change get pushed to the LDAP server. This will only be active if the property `ldap.auth.enabled` is also set to true. New users and groups will be created at the specified DN.

```
ldap.export.enabled=true
ldap.users.dn=ou=users,dc=example,dc=com
ldap.groups.dn=ou=groups,dc=example,dc=com
```

Set this to true to use the LDAP's password policy instead of the portal password policy.

```
ldap.password.policy.enabled=false
```

Set these values to be a portion of the error message returned by the appropriate directory server to allow the portal to recognize messages from the LDAP server. The default values will work for Fedora DS.

```
ldap.error.password.age=age
ldap.error.password.expired=expired
ldap.error.password.history=history
ldap.error.password.not.changeable=not allowed to change
ldap.error.password.syntax=syntax
```

```
ldap.error.password.trivial=trivial
ldap.error.user.lockout=retry limit
```

CAS

CAS is a property in the portal.properties file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using portal-ext.properties file.

Set this to true to enable CAS single sign on. NTLM will work only if LDAP authentication is also enabled and the authentication is made by screen name. If set to true, then the property auto.login.hooks must contain a reference to the class com.liferay.portal.security.auth.CASAutoLogin and the filter com.liferay.portal.servlet.filters.sso.cas.CASFilter must be referenced in web.xml.

```
cas.auth.enabled=false
```

A user may be authenticated from CAS and not yet exist in the portal. Set this to true to automatically import users from LDAP if they do not exist in the portal.

```
cas.import.from.ldap=false
```

Set the default values for the required CAS URLs. Set either cas.server.name or cas.service.url. Setting cas.server.name allows deep linking. See LEP-4423.

```
cas.login.url=https://localhost:8443/cas-web/login
cas.logout.url=https://localhost:8443/cas-web/logout
cas.server.name=localhost:8080
cas.service.url=
#cas.service.url=http://localhost:8080/c/portal/login
cas.service.url=http://localhost:8080/c/portal/login
cas.validate.url=https://localhost:8443/cas-web/proxyValidate
```

NTLM

NTLM is a property in the portal.properties file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using portal-ext.properties file.

Set this to true to enable NTLM single sign on. NTLM will work only if LDAP authentication is also enabled and the authentication is made by screen name. If set to true, then the property "auto.login.hooks" must contain a reference to the class com.liferay.portal.security.auth.NtlmAutoLogin and the filter com.liferay.portal.servlet.filters.sso.ntlm.NtlmFilter must be referenced in web.xml.

```
ntlm.auth.enabled=false
ntlm.auth.domain.controller=127.0.0.1
ntlm.auth.domain=EXAMPLE
```

OpenID

`OpenID` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true to enable OpenID authentication. If set to true, then the property `auto.login.hooks` must contain a reference to the class `com.liferay.portal.security.auth.OpenIdAutoLogin`.

```
open.id.auth.enabled=true
```

OpenSSO

`OpenSSO` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

These properties controls Liferay's integration with OpenSSO.

Set this to true to enable OpenSSO authentication.

```
open.sso.auth.enabled=false
```

Set the log in URL and log out URL. The first URL is the link to your OpenSSO server (which can be the same server as the one running Liferay); the second URL is the link to your Liferay Portal.

```
open.sso.login.url=http://openssohost.example.com:8080/opensso/UI/Login?
goto=http://portalhost.example.com:8080/c/portal/login
open.sso.logout.url=http://openssohost.example.com:8080/opensso/UI/Logout?
goto=http://portalhost.example.com:8080/web/guest/home
```

Set the URL to the OpenSSO service.

```
open.sso.service.url=http://openssohost.example.com:8080/opensso
```

Set the HTTP attribute name for the user's screen name.

```
open.sso.screen.name.attr=uid
```

Set the HTTP attribute name for the user's email address.

```
open.sso.email.address.attr=mail
```

Set the HTTP attribute name for the user's Common Name.

```
open.sso.first.name.attr=cn
```

Set the HTTP attribute name for the user's Surname.

```
open.sso.last.name.attr=sn
```

Authentication Pipeline

`Authentication Pipeline` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that implement `com.liferay.portal.security.auth.Authenticator`. These classes will run before or after the portal authentication begins.

The Authenticator class defines the constant values that should be used as return codes from the classes implementing the interface. If# authentication is successful, return SUCCESS; if the user exists but the passwords do not match, return FAILURE; and if the user does not exist on the system, return DNE.

Constants in Authenticator:

```
public static final int SUCCESS = 1;
public static final int FAILURE = -1;
public static final int DNE = 0;
```

In case you have several classes in the authentication pipeline, all of them have to return SUCCESS if you want the user to be able to login. If one of the authenticators returns FAILURE or DNE, the login fails.

Under certain circumstances, you might want to keep the information in the portal database in sync with an external database or an LDAP server. This can easily be achieved by implementing a class via LDAPAuth that updates the information stored in the portal user database whenever a user signs in.

Each portal instance can be configured at run time to either authenticate based on user IDs or email addresses. See the Admin portlet for more information.

Available authenticators are:

```
com.liferay.portal.security.auth.LDAPAuth
```

See the LDAP properties to configure the behavior of the `LDAPAuth` class.

```
auth.pipeline.pre=com.liferay.portal.security.auth.LDAPAuth
auth.pipeline.post=
```

Set this to true to enable password checking by the internal portal authentication. If set to false, you're essentially delegating password checking is delegated to the authenticators configured in `auth.pipeline.pre` and `auth.pipeline.post` settings.

```
auth.pipeline.enable.liferay.check=true
```

Input a list of comma-delimited class names that implement `com.liferay.portal.security.auth.AuthFailure`. These classes will run when a user has a failed login or when a user has reached the maximum number of failed logins.

```
auth.failure=com.liferay.portal.security.auth.LoginFailure
auth.max.failures=com.liferay.portal.security.auth.LoginMaxFailures
auth.max.failures.limit=5
```

Set the following to true if users are forwarded to the last visited path upon successful login. If set to false, users will be forwarded to their default layout page.

```
auth.forward.by.last.path=true
```

The login page reads a redirect by a parameter named redirect. If this property is set to true, then users will be redirected to the given redirect path upon successful login. If the user does not have permission to view that page, then the rule set by the property `auth.forward.by.last.path` will apply.

You can set the redirect manually from another application, by appending the redirect parameter in a url that looks like this: `/c/portal/login?redirect=%2Fgroup%2Femployees%2Fcalendar`. This url will redirect the user to the path `/group/employees/calendar` upon successful login.

```
auth.forward.by.redirect=true
```

Provide a list of comma-delimited paths that can be considered part of the last visited path.

```
auth.forward.last.paths=/document_library/get_file
```

Type a URL that will be used to login portal users whenever needed. By default, the portal's login page is used.

```
#auth.login.url=/web/guest/home
```

Type a friendly URL of a page that will be used to login portal users whenever the user is navigating a community and authentication is needed. By default, the portal's login page or the URL set in the property `auth.login.url` is used.

```
auth.login.community.url=/login
```

Type the name of the login portlet used in a page identified by the URL of the previous property (if one has been set). This will allow the portlet to have access to the redirect parameter and thus forward the users to the page where they were trying to access when necessary. You should leave the default value unless you have your own custom login portlet.

```
auth.login.portlet.name=58
```

Provide a list of comma-delimited paths that do not require authentication.

```
auth.public.paths=\
/blogs/find_entry,\
/blogs/rss,\
/blogs/trackback,\
\
/bookmarks/open_entry,\
\
/document_library/get_file,\
\
/journal/get_article,\
/journal/get_articles,\
/journal/get_latest_article_content,\
/journal/get_structure,\
/journal/get_template,\
/journal/view_article_content,\
/journal_articles/view_article_content,\
\
/layout_management/sitemap,\
\
/message_boards/find_category,\
/message_boards/find_message,\
/message_boards/find_thread,\
/message_boards/get_message_attachment,\
/message_boards/rss,\
\
/my_places/view,\
\
/polls/view_chart,\
\
/portal/expire_session,\
/portal/extend_session,\
/portal/extend_session_confirm,\
/portal/json_service,\
/portal/logout,\
/portal/open_id_request,\
/portal/open_id_response,\
/portal/session_click,\
```

```
/portal/session_tree_js_click,\
/portal/status,\
\
/search/open_search,\
/search/open_search_description.xml,\
\
/shopping/notify,\
\
/tags/rss,\
\
/wiki/get_page_attachment,\
/wiki/rss
```

Auto Login

`Auto Login` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that implement `com.liferay.portal.security.auth.AutoLogin`. These classes will run in consecutive order for all unauthenticated users until one of them return a valid user ID and password combination. If no valid combination is returned, then the request continues to process normally. If a valid combination is returned, then the portal will automatically login that user with the returned user ID and password combination.

For example, com.liferay.portal.security.auth.RememberMeAutoLogin reads from a cookie to automatically log in a user who had previously logged in while selecting the Remember Me box.

This interface allows deployers to easily configure the portal to work with other SSO servers. See `com.liferay.portal.security.auth.CASAutoLogin` for an example of how to configure the portal with Yale's SSO server.

```
auto.login.hooks=com.liferay.portal.security.auth.CASAutoLogin,com.liferay.-
portal.security.auth.NtlmAutoLogin,com.liferay.portal.security.
auth.OpenIdAutoLogin,com.liferay.portal.security.auth.OpenSSOAutoLogin,co
m.liferay.portal.security.auth.RememberMeAutoLogin
```

Set the hosts that will be ignored for auto login.

```
auto.login.ignore.hosts=
```

Set the paths that will be ignored for auto login.

```
auto.login.ignore.paths=
```

SSO With MAC

`SSO With MAC (Message Authentication Code)` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

To use SSO with MAC, post to an URL like:

```
http://localhost:8080/c/portal/login?cmd=already-registered&login=<userId|emailAddress>&
password=<MAC>
```

Pass the MAC in the password field. Make sure the MAC gets URL encoded because it might contain characters not allowed in a URL.

SSO with MAC also requires that you set the following property in `system.properties`:

```
com.liferay.util.servlet.SessionParameters=false
```

See the following links:

`http://support.liferay.com/browse/LEP-1288`

`http://en.wikipedia.org/wiki/Message_authentication_code`

Set the following to true to enable SSO with MAC.

```
auth.mac.allow=false
```

Set the algorithm to use for MAC encryption.

```
auth.mac.algorithm=MD5
```

Set the shared key used to generate the MAC.

```
auth.mac.shared.key=
```

Passwords

`Passwords` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following encryption algorithm to encrypt passwords. The default algorithm is SHA (SHA-1). If set to NONE, passwords are stored in the database as plain text. The SHA-512 algorithm is currently unsupported.

Examples:

```
passwords.encryption.algorithm=CRYPT
passwords.encryption.algorithm=MD2
passwords.encryption.algorithm=MD5
passwords.encryption.algorithm=NONE
passwords.encryption.algorithm=SHA
passwords.encryption.algorithm=SHA-256
passwords.encryption.algorithm=SHA-384
passwords.encryption.algorithm=SSHA
```

Digested passwords are encoded via base64 or hex encoding. The default is base64.

```
passwords.digest.encoding=base64
#passwords.digest.encoding=hex
```

Input a class name that extends `com.liferay.portal.security.pwd.BasicToolkit`. This class will be called to generate and validate passwords.

Examples:

```
passwords.toolkit=com.liferay.portal.security.pwd.PasswordPolicyToolkit
passwords.toolkit=com.liferay.portal.security.pwd.RegExpToolkit
```

If you choose to use `com.liferay.portal.security.pwd.PasswordPolicyToolkit` as your password toolkit, you can choose either static or dynamic password generation. Static is set through the property `passwords.passwordpolicytoolkit.static` and dynamic uses the class `com.liferay.util.PwdGenerator` to generate the password. If you are using LDAP password syntax checking, you will also have to use the static generator so that you can guarantee that passwords obey its rules.

Examples:

```
passwords.passwordpolicytoolkit.generator=static
passwords.passwordpolicytoolkit.generator=dynamic
passwords.passwordpolicytoolkit.static=iheartliferay
```

If you choose to use `com.liferay.portal.security.pwd.RegExpToolkit` as your password toolkit, set the regular expression pattern that will be used to generate and validate passwords.

Note that \ is replaced with \\ to work in Java.

The second pattern ensures that passwords must have at least 8 valid characters consisting of digits or letters.

Examples:

```
passwords.regexptoolkit.pattern=(?=.{4})(?:[a-zA-Z0-9]*)
passwords.regexptoolkit.pattern=(?=.{8})(?:[a-zA-Z0-9]*)
```

Set the length and key for generating passwords.

Examples:

```
passwords.regexptoolkit.charset=0123456789
passwords.regexptoolkit.charset=0123456789ABCDEFGHIJKLMNOPQRSTUVWXYZabcde-
fghijklmnopqrstuvwxyz
```

Examples:

```
passwords.regexptoolkit.length=4
passwords.regexptoolkit.length=8
```

Set the name of the default password policy.

```
passwords.default.policy.name=Default Password Policy
```

Permissions

`Permissions` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the default permission checker class used by `com.liferay.portal.security.permission.PermissionCheckerFactory` to check permissions for actions on objects. This class can be overridden with a custom class that extends `com.liferay.portal.security.permission.PermissionCheckerImpl`.

```
permissions.checker=com.liferay.portal.security.permission.PermissionCheckerImpl
```

Set the algorithm used to check permissions for a user. This is useful so that you can optimize the search for different databases. See `com.liferay.portal.service.impl.PermissionLocalServiceImpl`. The default is method two.

The first algorithm uses several if statements to query the database for these five things in order. If it finds any one of them, it returns true:

- Is the user connected to one of the permissions via group or organization roles?
- Is the user associated with groups or organizations that are directly connected to one of the permissions?
- Is the user connected to one of the permissions via user roles?
- Is the user connected to one of the permissions via user group roles?
- Is the user directly connected to one of the permissions?

```
permissions.user.check.algorithm=1
```

The second algorithm (the default) does a database join and checks the permissions in one step, by calling `countByGroupsRoles`, `countByGroupsPermissions`, `countByUsersRoles`, `countByUserGroupRole`, and `countByUsersPermissions` in one method.

```
permissions.user.check.algorithm=2
```

The third algorithm checks the permissions by checking for three things. It combines the role check into one step. If it finds any of the following items, it returns true:

- Is the user associated with groups or organizations that are directly connected to one of the permissions?
- Is the user associated with a role that is directly connected to one of the permissions?
- Is the user directly connected to one of the permissions?

```
permissions.user.check.algorithm=3
```

The fourth algorithm does a database join and checks the permissions that algorithm three checks in one step, by calling `countByGroupsPermissions`, `countByRolesPermissions`, and `countByUsersPermissions` in one method.

```
permissions.user.check.algorithm=4
```

Set the default permissions list filter class. This class must implement `com.liferay.portal.kernel.security.permission.PermissionsListFilter`. This is used if you want to filter the list of permissions before it is actually persisted. For example, if you want to make sure that all users who create objects never have the UPDATE action, then you can filter that list and remove any permissions that have the UPDATE action before it is persisted.

```
permissions.list.filter=com.liferay.portal.security.permission.PermissionsListFilterImpl
```

Captcha

`Captcha` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the maximum number of captcha checks per portlet session. Set this value to zero to always check. Set this value to a number less than zero to never check. Unauthenticated users will always be checked on every request if captcha checks is enabled.

```
captcha.max.challenges=1
```

Set whether or not to use captcha checks for the following actions.

```
captcha.check.portal.create_account=true
captcha.check.portal.send_password=true
captcha.check.portlet.message_boards.edit_category=false
captcha.check.portlet.message_boards.edit_message=false
```

Startup Events

`Startup Events` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that extend `com.liferay.portal.struts.SimpleAction`. These classes will run at the specified event.

The following is a global startup event that runs once when the portal initializes.

```
global.startup.events=com.liferay.portal.events.GlobalStartupAction
```

The following is an application startup event that runs once for every web site instance of the portal that initializes.

```
application.startup.events=com.liferay.portal.events.AppStartupAction
#application.startup.events=com.liferay.portal.events.AppStartupAction,com.l
iferay.portal.events.SampleAppStartupAction
```

Shutdown Events

`Shutdown Events` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that extend `com.liferay.portal.struts.SimpleAction`. These classes will run at the specified event.

Global shutdown event that runs once when the portal shuts down.

```
global.shutdown.events=com.liferay.portal.events.GlobalShutdownAction
```

Application shutdown event that runs once for every web site instance of the portal that shuts down.

```
application.shutdown.events=com.liferay.portal.events.AppShutdownAction
```

Programmatically kill the Java process on shutdown. This is a workaround for a bug in Tomcat and Linux where the process hangs on forever.

See http://support.liferay.com/browse/LEP-2048 for more information.

```
shutdown.programmatically.exit=false
```

Portal Events

`Portal Events` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that extend `com.liferay.portal.struts.Action`. These classes will run before or after the specified event.

Servlet service event: The pre-service events have an associated error page and will forward to that page if an exception is thrown during execution of the events. The pre-service events process before Struts processes the request.

Examples:

```
servlet.service.events.pre=com.liferay.portal.events.ServicePreAction
servlet.service.events.pre=com.liferay.portal.events.LogMemoryUsageAction,co
m.liferay.portal.events.LogThreadCountAction,com.liferay.portal.events.ServicePreAction
servlet.service.events.pre=com.liferay.portal.events.LogSessionIdAction,com.
liferay.portal.events.ServicePreAction
servlet.service.events.pre=com.liferay.portal.events.ServicePreAction,com.li
feray.portal.events.RandomLayoutAction
servlet.service.events.pre=com.liferay.portal.events.ServicePreAction,com.li
feray.portal.events.RandomLookAndFeelAction
```

Use the following to define the error page.

```
servlet.service.events.pre.error.page=/common/error.jsp
```

The post-service events process after Struts processes the request.

```
servlet.service.events.post=com.liferay.portal.events.ServicePostAction
```

Login Event

`Login Event` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Define events that can occur pre-login and post-login.

```
login.events.pre=com.liferay.portal.events.LoginPreAction
login.events.post=com.liferay.portal.events.LoginPostAction,com.liferay.portal.
events.DefaultLandingPageAction
```

Logout Event

`Logout Event` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Similarly, events can be defined for the log out event.

```
logout.events.pre=com.liferay.portal.events.LogoutPreAction
```

Example post events:

```
logout.events.post=com.liferay.portal.events.LogoutPostAction
logout.events.post=com.liferay.portal.events.LogoutPostAction,com.liferay.-
portal.events.GarbageCollectorAction
```

Default Landing Page

`Default Landing Page` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the default landing page path for logged in users relative to the server path. This is the page users are automatically redirected to after logging in. For example, if you want the default landing page to be `http://localhost:8080/web/guest/login`, set this to `/web/guest/login`. To activate this feature, set `auth.forward.by.last.path` to true. To customize the behavior, see `com.liferay.portal.events.DefaultLandingPageAction` in the `login.events.post` property above.

```
#default.landing.page.path=/web/guest/login
```

Default Logout Page

`Default Logout Page` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the default logout page path for users relative to the server path. This is the page users are automatically redirected to after logging out. For example, if you want the default logout page to

be `http://localhost:8080/web/guest/logout`, set this to `/web/guest/logout`. To activate this feature, set `auth.forward.by.last.path` to true. To customize the behavior, see `com.liferay.portal.events.DefaultLogoutPageAction` in the `logout.events.post` property above.

```
#default.logout.page.path=/web/guest/logout
```

Default Guest Public Layout

`Default Guest Public Layout` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

The Guest group must have at least one public page. The settings for the initial public page are specified in the following properties.

If you need to add more than one page, set the property `default.guest.public.layout.lar` to specify a LAR file instead.

For even more complex behavior, override the `addDefaultGuestPublicLayouts` method in `com.liferay.portal.service.impl.GroupLocalServiceImpl`.

Set the name of the public layout.

```
default.guest.public.layout.name=Welcome
```

Set the layout template ID of the public layout.

```
default.guest.public.layout.template.id=2_columns_ii
```

Set the portlet IDs for the columns specified in the layout template.

```
default.guest.public.layout.column-1=58
default.guest.public.layout.column-2=47
default.guest.public.layout.column-3=
default.guest.public.layout.column-4=
```

Set the friendly url of the public layout.

```
default.guest.public.layout.friendly.url=/home
```

Set the regular theme ID for the public layout.

```
#default.guest.public.layout.regular.theme.id=classic
```

Set the regular color scheme ID for the public layout.

```
#default.guest.public.layout.regular.color.scheme.id=01
```

Set the wap theme ID for the public layout.

```
#default.guest.public.layout.wap.theme.id=mobile
```

Set the wap color scheme for the public layout.

```
#default.guest.public.layout.wap.color.scheme.id=01
```

Specify a LAR file that can be used to create the guest public layouts. If this property is set, the previous layout properties will be ignored.

```
#default.guest.public.layouts.lar=${resource.repositories.root}/deploy/default_
guest_public.lar
```

Default User Private Layouts

`Degault User Private Layouts` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

If the properties `layout.user.private.layouts.enabled` and `layout.user.private.layouts.auto.create` are both set to true, then users will have private layouts and they will be automatically created. The following settings are used for the creation of for the initial private pages.

If you need to add more than one page, set the property `default.user.private.layout.lar` to specify a LAR file instead.

For even more complex behavior, override the `addDefaultUserPrivateLayouts` method in `com.liferay.portal.events.ServicePreAction`.

Set the name of the private layout.

```
default.user.private.layout.name=Welcome
```

Set the layout template ID of the private layout.

```
default.user.private.layout.template.id=2_columns_ii
```

Set the portlet IDs for the columns specified in the layout template.

```
default.user.private.layout.column-1=71_INSTANCE_OY0d,82,23,61
default.user.private.layout.column-2=11,29,8,19
default.user.private.layout.column-3=
default.user.private.layout.column-4=
```

Set the friendly url of the private layout.

```
default.user.private.layout.friendly.url=/home
```

Set the regular theme ID for the private layout.

```
#default.user.private.layout.regular.theme.id=classic
```

Set the regular color scheme ID for the private layout.

```
#default.user.private.layout.regular.color.scheme.id=01
```

Set the wap theme ID for the private layout.

```
#default.user.private.layout.wap.theme.id=mobile
```

Set the wap color scheme for the private layout.

```
#default.user.private.layout.wap.color.scheme.id=01
```

Specify a LAR file that can be used to create the user private layouts. If this property is set, the previous layout properties will be ignored.

```
#default.user.private.layouts.lar=${resource.repositories.root}/deploy/default_
user_private.lar
```

Default User Public Layouts

`Default User Public Layouts` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

If the properties `layout.user.public.layouts.enabled` and `layout.user.public.layouts.auto.create` are both set to true, then users will have public layouts and they will be automatically created. The following settings are used for the creation of the initial public pages.

If you need to add more than one page, set the property `default.user.public.layout.lar` to specify a LAR file instead.

For even more complex behavior, override the `addDefaultUserPublicLayouts` method in `com.liferay.portal.events.ServicePreAction`.

Set the name of the public layout.

```
default.user.public.layout.name=Welcome
```

Set the layout template ID of the public layout.

```
default.user.public.layout.template.id=2_columns_ii
```

Set the portlet IDs for the columns specified in the layout template.

```
default.user.public.layout.column-1=82,23
default.user.public.layout.column-2=8,19
default.user.public.layout.column-3=
default.user.public.layout.column-4=
```

Set the friendly url of the public layout.

```
default.user.public.layout.friendly.url=/home
```

Set the regular theme ID for the public layout.

```
#default.user.public.layout.regular.theme.id=classic
```

Set the regular color scheme ID for the public layout.

```
#default.user.public.layout.regular.color.scheme.id=01
```

Set the wap theme ID for the public layout.

```
#default.user.public.layout.wap.theme.id=mobile
```

Set the wap color scheme for the public layout.

```
#default.user.public.layout.wap.color.scheme.id=01
```

Specify a LAR file that can be used to create the user public layouts. If this property is set, the previous layout properties will be ignored.

```
#default.user.public.layouts.lar=${resource.repositories.root}/deploy/default_
user_public.lar
```

Default Admin

`Default Admin` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the default admin password.

```
default.admin.password=test
```

Set the default admin screen name prefix.

```
default.admin.screen.name=test
```

Set the default admin email address prefix.

```
default.admin.email.address.prefix=test
```

Set the default admin first name.

```
default.admin.first.name=Test
```

Set the default admin middle name.

```
default.admin.middle.name=
```

Set the default admin last name.

```
default.admin.last.name=Test
```

Layouts

`Layouts` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the list of layout types. The display text of each of the layout types is set in Content/Language.properties and prefixed with *layout.types*. You can create new layout types and specify custom settings for each layout type. End users input dynamic values as designed in the edit page. End users see the layout as designed in the view page. The generated URL can reference properties set in the edit page. Parentable layouts can contain child layouts. You can also specify a comma-delimited list of configuration actions that will be called for your layout when it is updated or deleted.

```
layout.types=portlet,panel,embedded,article,url,link_to_layout
```

Set whether or not private layouts are enabled. Set whether or not private layouts are modifiable. Set whether or not private layouts should be auto created if a user has no private layouts. If private layouts are not enabled, the other two properties are assumed to be false.

```
layout.user.private.layouts.enabled=true
layout.user.private.layouts.modifiable=true
layout.user.private.layouts.auto.create=true
```

Set whether or not public layouts are enabled. Set whether or not public layouts are modifiable. Set whether or not public layouts should be auto created if a user has no public layouts. If public layouts are not enabled, the other two properties are assumed to be false.

```
layout.user.public.layouts.enabled=true
layout.user.public.layouts.modifiable=true
layout.user.public.layouts.auto.create=true
```

Default Settings Layout

`Default Settings Layout` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

```
layout.edit.page=/portal/layout/edit/portlet.jsp
layout.view.page=/portal/layout/view/portlet.jsp
layout.url=${liferay:mainPath}/portal/layout?p_l_id=${liferay:plid}
layout.url.friendliable=true
layout.parentable=true
layout.sitemapable=true
layout.configuration.action.update=
layout.configuration.action.delete=
```

Settings for portlet layouts are inherited from the default settings.

```
layout.edit.page[portlet]=/portal/layout/edit/portlet.jsp
layout.view.page[portlet]=/portal/layout/view/portlet.jsp
layout.url[portlet]=${liferay:mainPath}/portal/layout?p_l_id=${liferay:plid}
layout.url.friendliable[portlet]=true
layout.parentable[portlet]=true
layout.configuration.action.update[portlet]=
layout.configuration.action.delete[portlet]=
```

Settings for panel layouts.

```
layout.edit.page[panel]=/portal/layout/edit/panel.jsp
layout.view.page[panel]=/portal/layout/view/panel.jsp
layout.url[panel]=${liferay:mainPath}/portal/layout?p_l_id=${liferay:plid}
layout.url.friendliable[panel]=true
layout.parentable[panel]=true
```

Settings for embedded layouts.

```
layout.edit.page[embedded]=/portal/layout/edit/embedded.jsp
layout.view.page[embedded]=/portal/layout/view/embedded.jsp
layout.url[embedded]=${liferay:mainPath}/portal/layout?p_l_id=${liferay:
plid}
layout.url.friendliable[embedded]=true
layout.parentable[embedded]=false
layout.sitemapable[embedded]=true
layout.configuration.action.update[embedded]=
layout.configuration.action.delete[embedded]=
```

Settings for article layouts.

```
layout.edit.page[article]=/portal/layout/edit/article.jsp
layout.view.page[article]=/portal/layout/view/article.jsp
layout.url.friendliable[article]=true
layout.url[article]=${liferay:mainPath}/portal/layout?p_l_id=${liferay:plid}
layout.parentable[article]=false
layout.sitemapable[article]=true
layout.configuration.action.update[article]=com.liferay.portal.model.Layout-
TypeArticleConfigurationUpdateAction
layout.configuration.action.delete[article]=com.liferay.portal.model.Layout-
TypeArticleConfigurationDeleteAction
```

Settings for URL layouts.

```
layout.edit.page[url]=/portal/layout/edit/url.jsp
layout.view.page[url]=
layout.url[url]=${url}
layout.url.friendliable[url]=true
layout.parentable[url]=false
layout.sitemapable[url]=false
layout.configuration.action.update[url]=
layout.configuration.action.delete[url]=
```

Settings for page layouts.

```
layout.edit.page[link_to_layout]=/portal/layout/edit/link_to_layout.jsp
layout.view.page[link_to_layout]=
layout.url[link_to_layout]=${liferay:mainPath}/portal/layout?p_l_id=${link-
ToPlid}
layout.url.friendliable[link_to_layout]=true
layout.parentable[link_to_layout]=true
layout.sitemapable[link_to_layout]=false
layout.configuration.action.update[link_to_layout]=
layout.configuration.action.delete[link_to_layout]=
```

Specify static portlets that cannot be moved and will always appear on every layout. Static portlets will take precedence over portlets that may have been dynamically configured for the layout.

For example, if you want the Hello World portlet to always appear at the start of the iteration of the first column for user layouts, set the property `layout.static.portlets.start.column-1[user]` to 47. If you want the Hello World portlet to always appear at the end of the second column for user layouts, set the property `layout.static.portlets.end.column-2[user]` to 47. You can input a list of comma-delimited portletIDs to specify more than one portlet. If the portlet is instanceable, add the *suffix _INSTANCE_abcd* to the portletID, where abcd is any random alphanumeric string.

The static portlets are fetched based on the properties controlled by custom filters using EasyConf. By default, the available filters are user, community, and organization.

```
layout.static.portlets.start.column-1[user]=3,6
layout.static.portlets.end.column-1[user]=14
layout.static.portlets.start.column-2[user]=71_INSTANCE_abcd,7
layout.static.portlets.end.column-2[user]=34,70
layout.static.portlets.start.column-3[user]=
layout.static.portlets.end.column-3[user]=
```

It is also possible to set static portlets based on the layout's friendly URL.

```
layout.static.portlets.start.column-1[user][/home]=3,6
layout.static.portlets.end.column-2[community][/home]=14
```

Set the static layouts for community layouts.

```
layout.static.portlets.start.column-1[community]=
layout.static.portlets.end.column-1[community]=
layout.static.portlets.start.column-2[community]=
layout.static.portlets.end.column-2[community]=
layout.static.portlets.start.column-3[community]=
layout.static.portlets.end.column-3[community]=
```

Set the static layouts for organization layouts.

```
layout.static.portlets.start.column-1[organization]=
layout.static.portlets.end.column-1[organization]=
layout.static.portlets.start.column-2[organization]=
layout.static.portlets.end.column-2[organization]=
layout.static.portlets.start.column-3[organization]=
layout.static.portlets.end.column-3[organization]=
```

Set the private group, private user, and public servlet mapping for `com.liferay.portal.servlet.FriendlyURLServlet`. This value must match the servlet mapping set in `web.xml`.

For example, if the private group pages are mapped to */group* and the group's friendly URL is set to */guest* and the layout's friendly URL is set to */company/community*, then the friendly URL for the page will be `http://www.liferay.com/group/guest/company/community`. Private group pages map to a community's private pages and are only available to authenticated users with the proper permissions.

For example, if the public pages are mapped to */web* and the group or user's friendly URL is set to */guest* and the layout's friendly URL is set to */company/community*, then the friendly URL for the page will be `http://www.liferay.com/web/guest/company/ community`. Public pages are available to unauthenticated users.

The friendly URLs for users, groups, and layouts can be set during runtime.

```
layout.friendly.url.private.group.servlet.mapping=/group
layout.friendly.url.private.user.servlet.mapping=/user
layout.friendly.url.public.servlet.mapping=/web
```

Redirect to this resource if the user requested a friendly URL that does not exist. Leave it blank to display nothing.

Note – For backward compatibility, this overrides the property layout.show.http.status for the 404 status code.

```
layout.friendly.url.page.not.found=/html/portal/404.html
```

Set the reserved keywords that cannot be used in a friendly URL.

```
layout.friendly.url.keywords=c,group,web,image,wsrp,page,public,private,rss,
tags
```

Set the following to true if layouts should remember (across requests) that a window state was set to maximized.

```
layout.remember.request.window.state.maximized=false
```

Set the following to true if guest users should see the maximize window icon.

```
layout.guest.show.max.icon=false
```

Set the following to true if guest users should see the minimize window icon.

```
layout.guest.show.min.icon=false
```

Set the following to true if users are shown that they do not have access to a portlet. The portlet init parameter show-portlet-access-denied will override this setting.

```
layout.show.portlet.access.denied=true
```

Set the following to true if users are shown that a portlet is inactive. The portlet init parameter show-portlet-inactive will override this setting.

```
layout.show.portlet.inactive=true
```

Set the following to true if the portal should show HTTP status codes like 404 if the requested page is not found.

```
layout.show.http.status=true
```

Set the default layout templateID used when creating layouts.

```
layout.default.template.id=2_columns_ii
```

Set the following to false to disable parallel rendering. You can also disable it on a per request basis by setting the attribute key `com.liferay.portal.util.WebKeys.PORTLET_PARALLEL_RENDER` to the `Boolean.FALSE` in a pre service event or by setting the URL parameter `p_p_parallel` to 0.

```
layout.parallel.render.enable=true
```

Set the name of a class that implements `com.liferay.portal.util.LayoutClone`. This class is used to remember maximized and minimized states on shared pages. The default implementation persists the state in the browser session.

```
layout.clone.impl=com.liferay.portal.util.SessionLayoutClone
```

Set the following to true to cache the content of layout templates. This is recommended because it improves performance for production servers. Setting it to false is useful during development if you need to make a lot of changes.

```
layout.template.cache.enabled=true
```

Set the default value for the *p_l_reset* parameter. If set to true, then render parameters are cleared when different pages are hit. This is not the behavior promoted by the portlet specification, but is the one that most end users seem to prefer.

```
layout.default.p_l_reset=true
```

Portlet URL

`Portlet URL` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true if calling setParameter on a portlet URL appends the parameter value versus replacing it. There is some disagreement in the interpretation of the JSR 168 spec among portlet developers over this specific behavior. Liferay Portal successfully passes the portlet TCK tests whether this value is set to true or false.

See http://support.liferay.com/browse/LEP-426 for more information.

```
portlet.url.append.parameters=false
```

Set the following to true to allow portlet URLs to generate with an anchor tag.

```
portlet.url.anchor.enable=false
```

JSR 286 specifies that portlet URLs are escaped by default. Set this to false to provide for better backwards compatibility.

If this is set to true, but a specific portlet application requires that its portlet URLs not be escaped by default, then modify `portlet.xml` and set the container run-time option `javax.portlet.escapeXml` to false.

```
portlet.url.escape.xml=false
```

Preferences

`Preferences` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true to validate portlet preferences on startup.

```
preference.validate.on.startup=false
```

Struts

`Struts` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input the custom Struts request processor that will be used by Struts based portlets. The custom class must extend `com.liferay.portal.struts.PortletRequestProcessor` and have the same constructor.

```
struts.portlet.request.processor=com.liferay.portal.struts.PortletRequest-
Processor
```

Images

`Images` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the location of the default spacer image that is used for missing images. This image must be found in the class path.

```
image.default.spacer=com/liferay/portal/dependencies/spacer.gif
```

Set the location of the default company logo image that is used for missing company logo images. This image must be found in the class path.

```
image.default.company.logo=com/liferay/portal/dependencies/company_logo.png
```

Set the locations of the default user portrait images that are used for missing user portrait images. This image must be found in the class path.

```
image.default.user.female.portrait=com/liferay/portal/dependencies/user_female_
portrait.gif
image.default.user.male.portrait=com/liferay/portal/dependencies/user_male_p
ortrait.gif
```

Editors

`Editors` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

You can configure individual JSP pages to use a specific implementation of the available WYSIWYG editors: *liferay*, *fckeditor*, *simple*, *tinymce*, or *tinymcesimple*.

```
editor.wysiwyg.default=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.blogs.edit_entry.jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.calendar.edit_configuration.
jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.enterprise_admin.
view.jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.invitation.edit_configuration.
jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.journal.edit_article_content.
jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.journal.
edit_article_content_xsd_el.jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.journal.edit_configuration.
jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.mail.edit.jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.mail.edit_message.jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.message_boards.edit_configuration.
jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.shopping.edit_configuration.
jsp=fckeditor
editor.wysiwyg.portal-web.docroot.html.portlet.wiki.edit_html.jsp=fckeditor
```

Fields

`Fields` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following fields to false so users cannot see them. Some company policies require gender and birthday information to always be hidden.

```
field.enable.com.liferay.portal.model.Contact.male=true
field.enable.com.liferay.portal.model.Contact.birthday=true
field.enable.com.liferay.portal.model.Organization.status=false
```

MIME Types

`MIME Types` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited mime types that are not available by default from `javax.activation.MimetypesFileTypeMap`.

```
mime.types=\
application/pdf pdf,\
application/vnd.ms-excel xls,\
application/vnd.ms-powerpoint ppt,\
application/msword doc
```

Amazon Licence Keys

`Amazon Licence Keys` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Provide a list of valid Amazon license keys. Configure additional keys by incrementing the last number. The keys are used following a Round-Robin algorithm. This is made available only for personal use. Please see the Amazon license at http://www.amazon.com for more information.

```
amazon.license.0=
amazon.license.1=
amazon.license.2=
amazon.license.3=
```

Instant Messenger

`Instant Messenger` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the AIM login and password which the system will use to communicate with users.

```
aim.login=
aim.password=
```

Due to a bug in *JOscarLib 0.3b1*, you must set the full path to the ICQ jar.

See the following posts:

http://sourceforge.net/forum/message.php?msg_id=1972697

http://sourceforge.net/forum/message.php?msg_id=1990487

```
icq.jar=C:/Java/orion-2.0.7/lib/icq.jar
```

Set the ICQ login and password which the system will use to communicate with users.

```
icq.login=
icq.password=
```

Set the MSN login and password which the system will use to communicate with users.

```
msn.login=
msn.password=
```

Set the YM login and password which the system will use to communicate with users.

```
ym.login=
ym.password=
```

Lucene Search

`Lucene Search` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true if you want to avoid any writes to the index. This is useful in some clustering environments where there is a shared index and only one node of the cluster updates it.

```
index.read.only=false
```

Set the following to true if you want to index your entire library of files on startup.

```
index.on.startup=false
```

Set the following to true if you want the indexing on startup to be executed on a separate thread to speed up execution.

```
index.with.thread=true
```

Designate whether Lucene stores indexes in a database via JDBC, file system, or in RAM.

Examples:

```
lucene.store.type=jdbc
lucene.store.type=file
lucene.store.type=ram
```

Lucene's storage of indexes via JDBC has a bug where temp files are not removed. This can eat up disk space over time. Set the following property to true to automatically clean up the temporary files once a day. See LEP-2180.

```
lucene.store.jdbc.auto.clean.up=true
```

Set the JDBC dialect that Lucene uses to store indexes in the database. This is only referenced if Lucene stores indexes in the database. Liferay will attempt to load the proper dialect based on the URL of the JDBC connection. For example, the property `lucene.store.jdbc.dialect.mysql` is read for the JDBC connection URL `jdbc:mysql://localhost/lportal`.

```
lucene.store.jdbc.dialect.db2=org.apache.lucene.store.jdbc.dialect.DB2Dialect
lucene.store.jdbc.dialect.derby=org.apache.lucene.store.jdbc.dialect.Derby-
Dialect
lucene.store.jdbc.dialect.hsqldb=org.apache.lucene.store.jdbc.dialect.HSQLDialect
lucene.store.jdbc.dialect.jtds=org.apache.lucene.store.jdbc.dialect.
SQLServerDialect
lucene.store.jdbc.dialect.microsoft=org.apache.lucene.store.jdbc.dialect.
SQLServerDialect
lucene.store.jdbc.dialect.mysql=org.apache.lucene.store.jdbc.dialect.MySQLDialect
#lucene.store.jdbc.dialect.mysql=org.apache.lucene.store.jdbc.dialect.
MySQLInnoDBDialect
#lucene.store.jdbc.dialect.mysql=org.apache.lucene.store.jdbc.dialect.
MySQLMyISAMDialect
lucene.store.jdbc.dialect.oracle=org.apache.lucene.store.jdbc.dialect.OracleDialect
lucene.store.jdbc.dialect.postgresql=org.apache.lucene.store.jdbc.dialect.-
PostgreSQLDialect
```

Set the directory where Lucene indexes are stored. This is only referenced if Lucene stores indexes in the file system.

```
lucene.dir=${resource.repositories.root}/lucene/
```

Input a class name that extends `com.liferay.portal.search.lucene.LuceneFileExtractor`. This class is called by Lucene to extract text from complex files so that they can be properly indexed.

```
lucene.file.extractor=com.liferay.portal.search.lucene.LuceneFileExtractor
```

The file extractor can sometimes return text that is not valid for Lucene. This property expects a regular expression. Any character that does not match the regular expression will be replaced with a blank space. Set an empty regular expression to disable this feature.

Examples:

```
lucene.file.extractor.regexp.strip=
lucene.file.extractor.regexp.strip=[\\d\\w]
```

Set the default analyzer used for indexing and retrieval.

Examples:

```
lucene.analyzer=org.apache.lucene.analysis.br.BrazilianAnalyzer
lucene.analyzer=org.apache.lucene.analysis.cn.ChineseAnalyzer
lucene.analyzer=org.apache.lucene.analysis.cjk.CJKAnalyzer
lucene.analyzer=org.apache.lucene.analysis.cz.CzechAnalyzer
lucene.analyzer=org.apache.lucene.analysis.nl.DutchAnalyzer
lucene.analyzer=org.apache.lucene.analysis.fr.FrenchAnalyzer
lucene.analyzer=org.apache.lucene.analysis.de.GermanAnalyzer
lucene.analyzer=org.apache.lucene.analysis.KeywordAnalyzer
lucene.analyzer=org.apache.lucene.index.memory.PatternAnalyzer
lucene.analyzer=org.apache.lucene.analysis.PerFieldAnalyzerWrapper
lucene.analyzer=org.apache.lucene.analysis.ru.RussianAnalyzer
lucene.analyzer=org.apache.lucene.analysis.SimpleAnalyzer
lucene.analyzer=org.apache.lucene.analysis.snowball.SnowballAnalyzer
lucene.analyzer=org.apache.lucene.analysis.standard.StandardAnalyzer
lucene.analyzer=org.apache.lucene.analysis.StopAnalyzer
lucene.analyzer=org.apache.lucene.analysis.WhitespaceAnalyzer
```

Set Lucene's merge factor. Higher numbers mean indexing goes faster but uses more memory. The default value from Lucene is 10. This should never be set to a number lower than 2.

```
lucene.merge.factor=10
```

Set how often to run Lucene's optimize method. Optimization speeds up searching but slows down writing. Set this property to 0 to always optimize. Set this property to an integer greater than 0 to optimize every X writes.

```
lucene.optimize.interval=1
```

SourceForge

`SourceForge` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

```
source.forge.mirrors=\
http://downloads.sourceforge.net,\ # Redirect
http://internap.dl.sourceforge.net,\ # San Jose, CA
http://superb-east.dl.sourceforge.net,\ # McLean, Virginia
http://superb-west.dl.sourceforge.net,\ # Seattle, Washington
http://easynews.dl.sourceforge.net,\ # Phoenix, AZ
http://kent.dl.sourceforge.net,\ # Kent, UK
http://ufpr.dl.sourceforge.net,\ # Curitiba, Brazil
http://belnet.dl.sourceforge.net,\ # Brussels, Belgium
http://switch.dl.sourceforge.net,\ # Lausanne, Switzerland
http://mesh.dl.sourceforge.net,\ # Duesseldorf, Germany
http://ovh.dl.sourceforge.net,\ # Paris, France
http://dfn.dl.sourceforge.net,\ # Berlin, Germany
http://heanet.dl.sourceforge.net,\ # Dublin, Ireland
http://garr.dl.sourceforge.net,\ # Bologna, Italy
http://surfnet.dl.sourceforge.net # Amsterdam, The Netherlands
http://jaist.dl.sourceforge.net,\ # Ishikawa, Japan
http://nchc.dl.sourceforge.net,\ # Tainan, Taiwan
http://optusnet.dl.sourceforge.net # Sydney, Australia
```

Value Object

`Value Object` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

You can add a listener for a specific class by setting the property `value.object.listener` with a list of comma-delimited class names that implement `com.liferay.portal.model.ModelListener`. These classes are pooled and reused and must be thread safe.

```
value.object.listener.com.liferay.portal.model.Contact=com.liferay.portal.-
model.ContactListener
value.object.listener.com.liferay.portal.model.Layout=com.liferay.portal.-
model.LayoutListener
value.object.listener.com.liferay.portal.model.LayoutSet=com.liferay.portal.
model.LayoutSetListener
value.object.listener.com.liferay.portal.model.PortletPreferences=com.liferay.
portal.model.PortletPreferencesListener
value.object.listener.com.liferay.portal.model.User=com.liferay.portal.model.
UserListener
value.object.listener.com.liferay.portlet.journal.model.JournalArticle=com.l
iferay.portlet.journal.model.JournalArticleListener
value.object.listener.com.liferay.portlet.journal.model.JournalTemplate=com.
liferay.portlet.journal.model.JournalTemplateListener
```

Value objects are cached by default. You can disable caching for all objects or per object.

For mapping tables, the key is the mapping table itself.

```
value.object.finder.cache.enabled=true
value.object.finder.cache.enabled.com.liferay.portal.model.Layout=true
value.object.finder.cache.enabled.com.liferay.portal.model.User=true
value.object.finder.cache.enabled.Users_Roles=true
```

Last Modified

`Last Modified` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true to check last modified date on server side CSS and JavaScript.

```
last.modified.check=true
```

Provide a list of comma-delimited paths that will only be executed when newer than the last modified date. These paths must extend `com.liferay.portal.lastmodified.LastModifiedAction`.

```
last.modified.paths=\
/portal/css_cached,\
/portal/javascript_cached
```

XSS

`XSS (Cross Site Scripting)` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to false to ensure that all persisted data is stripped of XSS hacks.

```
xss.allow=false
```

You can override the *xss.allow* setting for a specific class by setting the property *xss.allow* plus the class name.

```
xss.allow.com.liferay.portal.model.Portlet=true
xss.allow.com.liferay.portal.model.PortletPreferences=true
```

You can override the xss.allow setting for a specific field in a class by setting the property xss.allow plus the class and field name.

```
xss.allow.com.liferay.portlet.journal.model.JournalArticle.content=true
xss.allow.com.liferay.portlet.journal.model.JournalStructure.xsd=true
xss.allow.com.liferay.portlet.journal.model.JournalTemplate.xsl=true
```

Communication Link

`Communication Link` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the JGroups properties used by the portal to communicate with other instances of the portal. This is only needed if the portal is running in a clustered environment. The JGroups settings provide a mechanism for the portal to broadcast messages to the other instances of the portal. The specified multi-cast address should be unique for internal portal messaging only. You will still need to set the Hibernate and Ehcache settings for database clustering.

```
comm.link.properties=UDP(bind_addr=127.0.0.1;mcast_addr=231.12.21.102;mcast_
port=45566;ip_ttl=32;mcast_send_buf_size=150000;mcast_recv_buf_size=80000):P
ING(timeout=2000;num_initial_members=3):MERGE2(min_interval=5000;max_interval=
10000):FD_SOCK:VERIFY_SUSPECT(timeout=1500):pbcast.NAKACK(gc_lag=50;retransmit_
timeout=300,600,1200,2400,4800;max_xmit_size=8192):UNICAST(timeout=
300,600,1200,2400):pbcast.STABLE(desired_avg_gossip=20000):FRAG(frag_size=80
96;down_thread=false;up_thread=false):pbcast.GMS(join_timeout=5000;join_retr
y_timeout=2000;shun=false;print_local_addr=true)
```

Content Delivery Network

`Content Delivery Network` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the hostname that will be used to serve static content via a CDN. This property can be overridden dynamically at runtime by setting the HTTP parameter *cdn_host*.

```
cdn.host=
```

Counter

`Counter` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the number of increments between database updates to the Counter table. Set this value to a higher number for better performance.

```
counter.increment=100
```

Lock

`Lock` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the lock expiration time for each class.

Example: 1 Day

```
lock.expiration.time.com.liferay.portlet.documentlibrary.model.DLFileEntry=8
6400000
```

Example: 20 Minutes

```
lock.expiration.time.com.liferay.portlet.wiki.model.WikiPage=1200000
```

JBI

`JBI` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Connect to either Mule or ServiceMix as your ESB.

Examples:

```
jbi.workflow.url=http://localhost:8080/mule-web/workflow
jbi.workflow.url=http://localhost:8080/servicemix-web/workflow
```

JCR

`JCR` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Liferay includes Jackrabbit (http://jackrabbit.apache.org) by default as its JSR-170 Java Content Repository.

```
jcr.initialize.on.startup=false
jcr.workspace.name=liferay
jcr.node.documentlibrary=documentlibrary
```

```
jcr.jackrabbit.repository.root=${resource.repositories.root}/jackrabbit
jcr.jackrabbit.config.file.path=${jcr.jackrabbit.repository.root}/repository.
xml
jcr.jackrabbit.repository.home=${jcr.jackrabbit.repository.root}/home
jcr.jackrabbit.credentials.username=none
jcr.jackrabbit.credentials.password=none
```

OpenOffice

`OpenOffice` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Enabling OpenOffice integration allows the Document Library portlet to provide document conversion functionality. To start OpenOffice as a service, run the command:

```
soffice -headless -accept="socket,host=127.0.0.1,port=8100;urp;" -nofirststartwizard
```

This is tested with OpenOffice 2.3.x.

```
openoffice.server.enabled=false
openoffice.server.host=127.0.0.1
openoffice.server.port=8100
```

POP

`POP` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true to enable polling of email notifications from a POP server. The user credentials are the same used for SMTP authentication and is specified in the `mail/MailSession` configuration for each application server.

```
pop.server.notifications.enabled=false
```

Set the interval on which the POPNotificationsJob will run. The value is set in one minute increments.

```
pop.server.notifications.interval=1
pop.server.subdomain=events
```

Quartz

`Quartz` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

These properties define the connection to the built-in Quartz job scheduling engine.

```
org.quartz.dataSource.ds.connectionProvider.class=com.liferay.portal.scheduler.
quartz.QuartzConnectionProviderImpl
org.quartz.jobStore.class=org.quartz.impl.jdbcjobstore.JobStoreTX
org.quartz.jobStore.dataSource=ds
org.quartz.jobStore.driverDelegateClass=com.liferay.portal.scheduler.
quartz.DynamicDriverDelegate
org.quartz.jobStore.isClustered=false
org.quartz.jobStore.misfireThreshold=60000
org.quartz.jobStore.tablePrefix=QUARTZ_
org.quartz.jobStore.useProperties=true
org.quartz.scheduler.instanceId=AUTO
org.quartz.threadPool.class=org.quartz.simpl.SimpleThreadPool
org.quartz.threadPool.threadCount=5
org.quartz.threadPool.threadPriority=5
```

Scheduler

`Scheduler` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to false to disable all scheduler classes defined in `liferay-portlet.xml` and in the property `scheduler.classes`.

```
scheduler.enabled=true
```

Input a list of comma-delimited class names that implement `com.liferay.portal.kernel.job.Scheduler`. These classes allow jobs to be scheduled on startup. These classes are not associated to any one portlet.

```
scheduler.classes=
```

Social Bookmarks

`Social Bookmarks` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

The Blogs portlet allows for the posting of entries to various popular social bookmarking sites. The example ones are the defaults; to configure more, just add the site in the following format.

```
social.bookmark.types=blinklist,delicious,digg,furl,newsvine,reddit,technorati
social.bookmark.post.url[blinklist]=http://blinklist.com/index.php?
Action=Blink/addblink.php&url=${liferay:social-bookmark:url}&Title=${liferay:
social-bookmark:title}
social.bookmark.post.url[delicious]=http://del.icio.us/post?url=${liferay:
social-bookmark:url}&title=${liferay:social-bookmark:title}
social.bookmark.post.url[digg]=http://digg.com/submit?phase=2&url=${liferay:
social-bookmark:url}
social.bookmark.post.url[furl]=http://furl.net/storeIt.jsp?u=${liferay:social-
bookmark:url}&t=${liferay:social-bookmark:title}
social.bookmark.post.url[newsvine]=http://www.newsvine.com/_tools/seed&save?
u=${liferay:social-bookmark:url}&h=${liferay:social-bookmark:title}
social.bookmark.post.url[reddit]=http://reddit.com/submit?url=${liferay:social-
bookmark:url}&title=${liferay:social-bookmark:title}
social.bookmark.post.url[technorati]=http://technorati.com/cosmos/search.htm
l?url=${liferay:social-bookmark:url}
```

Velocity Engine

`Velocity Engine` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a list of comma-delimited class names that extend `com.liferay.util.velocity.VelocityResourceListener`. These classes will run in sequence to allow you to find the applicable ResourceLoader to load a Velocity template.

```
velocity.engine.resource.listeners=com.liferay.portal.velocity.ServletVelocityResourceListener,
com.liferay.portal.velocity.JournalTemplateVelocityResourceListener,
com.liferay.portal.velocity.ThemeLoaderVelocityResourceListener,
com.liferay.portal.velocity.ClassLoaderVelocityResourceListener
```

Set the Velocity resource managers. You can extend the Velocity's default resource managers for better scalability.

Note that the modification check interval is not respected because the resource loader implementation does not know the last modified date of a resource. This means you will need to turn off caching if you want to be able to modify VM templates in themes and see the changes right away.

```
velocity.engine.resource.manager=com.liferay.portal.velocity.LiferayResourceManager
velocity.engine.resource.manager.cache=com.liferay.portal.velocity.LiferayResourceCache
velocity.engine.resource.manager.cache.enabled=true
#velocity.engine.resource.manager.modification.check.interval=0
```

Input a list of comma-delimited macros that will be loaded. These files must exist in the class path.

```
velocity.engine.velocimacro.library=VM_global_library.vm,VM_liferay.vm
```

Set the Velocity logging configuration.

```
velocity.engine.logger=org.apache.velocity.runtime.log.SimpleLog4JLogSystem
velocity.engine.logger.category=org.apache.velocity
```

Virtual Hosts

`Virtual Hosts` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the hosts that will be ignored for virtual hosts.

```
virtual.hosts.ignore.hosts=\
127.0.0.1,\
localhost
```

Set the paths that will be ignored for virtual hosts.

```
virtual.hosts.ignore.paths=\
/c,\
\
/c/portal/change_password,\
/c/portal/css_cached,\
/c/portal/extend_session,\
/c/portal/extend_session_confirm,\
/c/portal/javascript_cached,\
/c/portal/json_service,\
/c/portal/layout,\
/c/portal/login,\
/c/portal/logout,\
/c/portal/render_portlet,\
/c/portal/reverse_ajax,\
/c/portal/session_tree_js_click,\
/c/portal/status,\
/c/portal/update_layout,\
/c/portal/update_terms_of_use,\
/c/portal/upload_progress_poller,\
\
/c/layout_configuration/templates,\
/c/layout_management/update_page
```

HTTP

HTTP is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See `system.properties` for more HTTP settings.

Set the maximum number of connections.

```
#com.liferay.portal.util.HttpImpl.max.connections.per.host=2
#com.liferay.portal.util.HttpImpl.max.total.connections=20
```

Set the proxy authentication type.

```
#com.liferay.portal.util.HttpImpl.proxy.auth.type=username-password
#com.liferay.portal.util.HttpImpl.proxy.auth.type=ntlm
```

Set user name and password used for HTTP proxy authentication.

```
#com.liferay.portal.util.HttpImpl.proxy.username=
#com.liferay.portal.util.HttpImpl.proxy.password=
```

Set additional properties for NTLM authentication.

```
#com.liferay.portal.util.HttpImpl.proxy.ntlm.domain=
#com.liferay.portal.util.HttpImpl.proxy.ntlm.host=
```

Set the connection timeout when fetching HTTP content.

```
com.liferay.portal.util.HttpImpl.timeout=10000
```

Servlet Filters

`Servlet Filters` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

If the user can unzip compressed HTTP content, the compression filter will zip up the HTTP content before sending it to the user. This will speed up page rendering for users that are on dial up.

```
com.liferay.portal.servlet.filters.compression.CompressionFilter=true
```

This double click filter will prevent double clicks at the server side. Prevention of double clicks is already in place on the client side. However, some sites require a more robust solution. This is turned off by default since most sites will not need it.

```
com.liferay.portal.servlet.filters.doubleclick.DoubleClickFilter=false
```

The header filter is used to set request headers.

```
com.liferay.portal.servlet.filters.header.HeaderFilter=true
```

The strip filter will remove blank lines from the outputted content. This will speed up page rendering for users that are on dial up.

```
com.liferay.portal.servlet.filters.strip.StripFilter=true
```

The layout cache filter will cache pages to speed up page rendering for guest users. See `ehcache.xml` to modify the cache expiration time to live.

```
com.liferay.portal.servlet.filters.layoutcache.LayoutCacheFilter=true
```

The sessionID filter ensure that only one session is created between http and https sessions. This is useful if you want users to login via https but have them view the rest of the site via http. This is disabled by default. Do not enable this unless you thoroughly understand how cookies, http, and https work.

```
com.liferay.portal.servlet.filters.sessionid.SessionIdFilter=false
```

The Velocity filter will process **/css/main.css* as a Velocity template.

```
com.liferay.portal.servlet.filters.velocity.VelocityFilter=false
```

The virtual host filter maps hosts to public and private pages. For example, if the public virtual host is `www.helloworld.com` and the friendly URL is `/helloworld`, then `http://www.helloworld.com` is mapped to `http://localhost:8080/web/helloworld`.

```
com.liferay.portal.servlet.filters.virtualhost.VirtualHostFilter=true
```

Upload Servlet Request

`Upload Servlet Request` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the maximum file size. Default is 1024 * 1024 * 100.

```
com.liferay.portal.upload.UploadServletRequestImpl.max.size=104857600
```

Set the temp directory for uploaded files.

```
#com.liferay.portal.upload.UploadServletRequestImpl.temp.dir=C:/Temp
```

Set the threshold size to prevent extraneous serialization of uploaded data.

```
com.liferay.portal.upload.LiferayFileItem.threshold.size=262144
```

Set the threshold size to prevent out of memory exceptions caused by caching excessively large uploaded data. Default is 1024 * 1024 * 10.

```
com.liferay.portal.upload.LiferayInputStream.threshold.size=10485760
```

Web Server

`Web Server` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the HTTP and HTTPs ports when running the portal in a J2EE server that is sitting behind another web server like Apache. Set the values to -1 if the portal is not running behind another web server like Apache.

```
web.server.http.port=-1
web.server.https.port=-1
```

Set the hostname that will be used when the portlet generates URLs. Leaving this blank will mean the host is derived from the servlet container.

```
web.server.host=
```

Set the preferred protocol.

```
web.server.protocol=https
```

Set this to true to display the server name at the bottom of every page. This is useful when testing clustering configurations so that you can know which node you are accessing.

```
web.server.display.node=false
```

WebDAV

`WebDAV` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true to enable programmatic configuration to let the Web- DAV be configured for litmus testing. This should never be set to true unless you are running the litmus tests.

```
webdav.litmus=false
```

Set a list of files for the WebDAV servlet to ignore processing.

```
webdav.ignore=.DS_Store,.metadata_index_homes_only,.metadata_never_index,.Sp
otlight-V100,.TemporaryItems,.Trashes
```

Set the tokens for supported WebDAV storage paths.

```
webdav.storage.tokens=document_library,image_gallery,journal
```

Set the class names for supported WebDAV storage classes.

```
webdav.storage.class[document_library]=com.liferay.portlet.documentlibrary.
webdav.DLWebDAVStorageImpl
webdav.storage.class[image_gallery]=com.liferay.portlet.imagegallery.webdav.
IGWebDAVStorageImpl
webdav.storage.class[journal]=com.liferay.portlet.journal.webdav.JournalWeb-
DAVStorageImpl
```

Main Servlet

`Main Servlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Servlets can be protected by `com.liferay.portal.servlet.filters.secure.SecureFilter`.

Input a list of comma-delimited IPs that can access this servlet. Input a blank list to allow any IP to access this servlet. SERVER_IP will be replaced with the IP of the host server.

```
main.servlet.hosts.allowed=
```

Set the following to true if this servlet can only be accessed via https.

```
main.servlet.https.required=false
```

Axis Servlet

`Axis Servlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See Main Servlet on how to protect this servlet.

```
axis.servlet.hosts.allowed=127.0.0.1,SERVER_IP
axis.servlet.https.required=false
```

JSON Tunnel Servlet

`JSON Tunnel Servlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See Main Servlet on how to protect this servlet.

```
json.servlet.hosts.allowed=
json.servlet.https.required=false
```

Liferay Tunnel Servlet

`Liferay Tunnel Servlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See Main Servlet on how to protect this servlet.

```
tunnel.servlet.hosts.allowed=127.0.0.1,SERVER_IP
tunnel.servlet.https.required=false
```

Spring Remoting Servlet

`Spring Remoting Servlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See Main Servlet on how to protect this servlet.

```
spring.remoting.servlet.hosts.allowed=127.0.0.1,SERVER_IP
spring.remoting.servlet.https.required=false
```

WebDAV Servlet

`WebDAV Servlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See Main Servlet on how to protect this servlet.

```
webdav.servlet.hosts.allowed=
webdav.servlet.https.required=false
```

Admin Portlet

`Admin Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

You can set some administrative defaults by using these properties. The first time you bring up your portal, these values will then already be set in the Admin portlet. All values should be separated by \n characters.

Set up default group names.

```
admin.default.group.names=
```

Set up default role names.

```
admin.default.role.names=Power User\nUser
```

Set up default user group names.

```
admin.default.user.group.names=
```

The rest of these properties map to their values in the Admin portlet.

```
admin.mail.host.names=
admin.reserved.screen.names=
admin.reserved.email.addresses=
admin.email.from.name=Joe Bloggs
admin.email.from.address=test@liferay.com
admin.email.user.added.enabled=true
admin.email.user.added.subject=com/liferay/portlet/admin/dependencies/email_
user_added_subject.tmpl
admin.email.user.added.body=com/liferay/portlet/admin/dependencies/email_use
r_added_body.tmpl
admin.email.password.sent.enabled=true
admin.email.password.sent.subject=com/liferay/portlet/admin/dependencies/ema
il_password_sent_subject.tmpl
admin.email.password.sent.body=com/liferay/portlet/admin/dependencies/email_
password_sent_body.tmpl
```

Announcements Portlet

`Announcements Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Configure email notification settings.

```
announcements.email.from.name=Joe Bloggs
announcements.email.from.address=test@liferay.com
announcements.email.to.name=
announcements.email.to.address=noreply@liferay.com
announcements.email.subject=com/liferay/portlet/announcements/dependencies/e
mail_subject.tmpl
announcements.email.body=com/liferay/portlet/announcements/dependencies/emai
l_body.tmpl
```

Set the list of announcement types. The display text of each of the announcement types is set in `content/Language.properties`.

```
announcements.entry.types=general,news,test
```

Set the interval on which the CheckEntryJob will run. The value is set in one minute increments.

```
announcements.entry.check.interval=15
```

Blogs Portlet

`Blogs Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

The following properties affect the Blogs portlet.

```
blogs.email.comments.added.enabled=true
blogs.email.comments.added.subject=com/liferay/portlet/blogs/dependencies/em
ail_comments_added_subject.tmpl
blogs.email.comments.added.body=com/liferay/portlet/blogs/dependencies/email
_comments_added_body.tmpl
blogs.page.abstract.length=400
blogs.rss.abstract.length=200
blogs.trackback.excerpt.length=50
```

Set the interval on which the `TrackbackVerifierJob` will run. The value is set in one minute increments.

```
blogs.trackback.verifier.job.interval=5
```

Calendar Portlet

`Calendar Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the list of event types. The display text of each of the event types is set in `content/Language.properties`.

```
calendar.event.types=anniversary,appointment,bill-payment,birthday,breakfast,
call,chat,class,club-event,concert,dinner,event,graduation,happyhour,
holiday,interview,lunch,meeting,movie,net-event,other,party,performance,
press-release,reunion,sports-event,training,travel,tvshow,
vacation,wedding
```

Set the interval on which the `CheckEventJob` will run. The value is set in one minute increments.

```
calendar.event.check.interval=15
```

Configure email notification settings.

```
calendar.email.from.name=Joe Bloggs
calendar.email.from.address=test@liferay.com
calendar.email.event.reminder.enabled=true
calendar.email.event.reminder.subject=com/liferay/portlet/calendar/dependencies/
email_event_reminder_subject.tmpl
calendar.email.event.reminder.body=com/liferay/portlet/calendar/dependencies/
email_event_reminder_body.tmpl
```

Communities Portlet

`Communities Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Configure email notification settings.

```
communities.email.from.name=Joe Bloggs
communities.email.from.address=test@liferay.com
communities.email.membership.reply.subject=com/liferay/portlet/communities/d
ependencies/email_membership_reply_subject.tmpl
communities.email.membership.reply.body=com/liferay/portlet/communities/dependencies/
email_membership_reply_body.tmpl
communities.email.membership.request.subject=com/liferay/portlet/communities
/dependencies/email_membership_request_subject.tmpl
communities.email.membership.request.body=com/liferay/portlet/communities/de
pendencies/email_membership_request_body.tmpl
```

Document Library Portlet

`Document Library Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the name of a class that implements `com.liferay.documentlibrary.util.Hook`. The document library server will use this to persist documents.

Available hooks are:

- `com.liferay.documentlibrary.util.FileSystemHook`
- `com.liferay.documentlibrary.util.JCRHook`
- `com.liferay.documentlibrary.util.S3Hook`

Examples:

```
dl.hook.impl=com.liferay.documentlibrary.util.FileSystemHook
dl.hook.impl=com.liferay.documentlibrary.util.JCRHook
dl.hook.impl=com.liferay.documentlibrary.util.S3Hook
```

FileSystemHook

`FileSystemHook` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

```
dl.hook.file.system.root.dir=${resource.repositories.root}/document_library
```

S3Hook

`S3Hook` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

```
dl.hook.s3.access.key=
dl.hook.s3.secret.key=
dl.hook.s3.bucket.name=
```

Set the maximum file size and valid file extensions for documents. A value of 0 for the maximum file size can be used to indicate unlimited file size. However, the maximum file size allowed is set in the property `com.liferay.portal.upload.UploadServletRequestImpl.max.size`.

Examples:

```
#dl.file.max.size=307200
#dl.file.max.size=1024000
dl.file.max.size=3072000
```

A file extension of * will permit all file extensions.

You can map a GIF for the extension by adding the image to the theme's image display and document library folder. The wildcard extension of * will be ignored. For example, the default image for the DOC extension would be found in: `/html/themes/_unstyled/images/document_library/doc.gif`.

`Example File Extensions:`

```
dl.file.extensions=.bmp,.css,.doc,.dot,.gif,.gz,.htm,.html,.jpg,.js,.lar,.od
b,.odf,.odg,.odp,.ods,.odt,.pdf,.png,.ppt,.rtf,.swf,.sxc,.sxi,.sxw,.tar,.tif
f,.tgz,.txt,.vsd,.xls,.xml,.zip
```

Set which files extensions are comparable by the diff tool. If OpenOffice integration is enabled, then it is also possible to compare some binary files that are can be converted to text.

```
dl.comparable.file.extensions=.css,.js,.htm,.html,.txt,.xml
#dl.comparable.file.extensions=.css,.doc,.js,.htm,.html,.odt,.rtf,.sxw,.txt,
.xml
```

Set folder names that will be used to synchronize with a community's set of private and public layouts. This will allow users to manage layouts using the Document Library portlet, and ultimately, via WebDAV. This feature is experimental.

```
dl.layouts.sync.enabled=false
dl.layouts.sync.private.folder=Pages - Private
dl.layouts.sync.public.folder=Pages - Public
```

Image Gallery Portlet

`Image Gallery Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the maximum file size and valid file extensions for images. A value of 0 for the maximum file size can be used to indicate unlimited file size. However, the maximum file size allowed is set in the property `com.liferay.portal.upload.UploadServletRequestImpl.max.size`.

```
ig.image.max.size=10240000
```

A file extension of * will permit all file extensions.

```
ig.image.extensions=.bmp,.gif,.jpeg,.jpg,.png,.tif,.tiff
```

Set the maximum thumbnail height and width in pixels. Set dimension of the custom images to 0 to disable creating a scaled image of that size.

```
ig.image.thumbnail.max.dimension=150
#ig.image.custom1.max.dimension=100
#ig.image.custom2.max.dimension=0
```

Invitation Portlet

`Invitation Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

```
invitation.email.max.recipients=20
invitation.email.message.body=com/liferay/portlet/invitation/dependencies/em
ail_message_body.tmpl
invitation.email.message.subject=com/liferay/portlet/invitation/dependencies/
email_message_subject.tmpl
```

Journal Portlet

`Journal Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true if articleIDs should always be autogenerated.

```
journal.article.force.autogenerate.id=true
```

Set this to true so that only the latest version of an article that is also not approved can be saved without incrementing version.

```
journal.article.force.increment.version=false
```

Set the list of article types. The display text of each of the article types is set in `content/Language.properties`.

```
journal.article.types=announcements,blogs,general,news,press-release,test
```

Set the token used when inserting simple page breaks in articles.

```
journal.article.token.page.break=@page_break@
```

Set the interval on which the `CheckArticleJob` will run. The value is set in one minute increments.

```
journal.article.check.interval=15
```

Set this to true if feedIDs should always be autogenerated.

```
journal.feed.force.autogenerate.id=false
```

Set this to true if structureIDs should always be autogenerated.

```
journal.structure.force.autogenerate.id=false
```

Set this to true if templateIDs should always be autogenerated.

```
journal.template.force.autogenerate.id=false
```

Input a comma-delimited list of variables which are restricted from the context in Velocity based Journal templates.

```
journal.template.velocity.restricted.variables=serviceLocator
```

Set the maximum file size and valid file extensions for images. A value of 0 for the maximum file size can be used to indicate unlimited file size. However, the maximum file size allowed is set in the property `com.liferay.portal.upload.UploadServletRequestImpl.max.size`.

```
journal.image.small.max.size=51200
```

A file extension of * will permit all file extensions.

```
journal.image.extensions=.gif,.jpeg,.jpg,.png
```

Input a list of comma-delimited class names that extend `com.liferay.portlet.journal.util.TransformerListener`. These classes will run in sequence to allow you to modify the XML and XSL before it's transformed and allow you to modify the final output.

```
journal.transformer.listener=\
com.liferay.portlet.journal.util.TokensTransformerListener,\
#com.liferay.portlet.journal.util.PropertiesTransformerListener,\
com.liferay.portlet.journal.util.ContentTransformerListener,\
com.liferay.portlet.journal.util.LocaleTransformerListener,\
com.liferay.portlet.journal.util.RegexTransformerListener,\
com.liferay.portlet.journal.util.ViewCounterTransformerListener
```

Provide a list of regular expression patterns and replacements that will be applied to outputted Journal content. The list of properties must end with a subsequent integer (0, 1, and so on) and it is assumed that the list has reached an end when the pattern or replacement is not set. See `com.liferay.portlet.journal.util.RegexTransformerListener` for implementation details.

```
#journal.transformer.regex.pattern.0=beta.sample.com
#journal.transformer.regex.replacement.0=production.sample.com
#journal.transformer.regex.pattern.1=staging.sample.com
#journal.transformer.regex.replacement.1=production.sample.com
```

Set whether to synchronize content searches when server starts.

```
journal.sync.content.search.on.startup=false
```

Configure mail notification settings.

```
journal.email.from.name=Joe Bloggs
journal.email.from.address=test@liferay.com
journal.email.article.approval.denied.enabled=false
journal.email.article.approval.denied.subject=com/liferay/portlet/journal/de
pendencies/email_article_approval_denied_subject.tmpl
journal.email.article.approval.denied.body=com/liferay/portlet/journal/dependencies/
email_article_approval_denied_body.tmpl
journal.email.article.approval.granted.enabled=false
journal.email.article.approval.granted.subject=com/liferay/portlet/journal/d
ependencies/email_article_approval_granted_subject.tmpl
journal.email.article.approval.granted.body=com/liferay/portlet/journal/dependencies/
email_article_approval_granted_body.tmpl
journal.email.article.approval.requested.enabled=false
journal.email.article.approval.requested.subject=com/liferay/portlet/journal
/dependencies/email_article_approval_requested_subject.tmpl
journal.email.article.approval.requested.body=com/liferay/portlet/journal/de
pendencies/email_article_approval_requested_body.tmpl
journal.email.article.review.enabled=false
journal.email.article.review.subject=com/liferay/portlet/journal/dependencies/
email_article_review_subject.tmpl
journal.email.article.review.body=com/liferay/portlet/journal/dependencies/e
mail_article_review_body.tmpl
```

Specify the strategy used when Journal content is imported using the LAR system.

```
journal.lar.creation.strategy=com.liferay.portlet.journal.lar.JournalCreationStrategyImpl
```

Specify the path to the template used for providing error messages on Journal templates.

```
journal.error.template.velocity=com/liferay/portlet/journal/dependencies/error.
vm
journal.error.template.xsl=com/liferay/portlet/journal/dependencies/error.
xsl
```

Journal Articles Portlet

`Journal Articles Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the available values for the number of articles to display per page.

```
journal.articles.page.delta.values=5,10,25,50,100
```

Mail Portlet

`Mail Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to false if administrator should not be allowed to change the mail domain via the Admin portlet.

```
mail.mx.update=true
```

Set the name of a class that implements `com.liferay.mail.util.Hook`. The mail server will use this class to ensure that the mail and portal servers are synchronized on user information. The portal will not know how to add, update, or delete users from the mail server except through this hook.

Available hooks are:

- `com.liferay.mail.util.CyrusHook`
- `com.liferay.mail.util.DummyHook`
- `com.liferay.mail.util.FuseMailHook`
- `com.liferay.mail.util.SendmailHook`
- `com.liferay.mail.util.ShellHook`

Example:

```
mail.hook.impl=com.liferay.mail.util.DummyHook
```

CyrusHook

`CyrusHook` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the commands for adding, updating, and deleting a user where %1% is the userID. Replace the password with the password for the cyrus user.

Add Examples:

```
mail.hook.cyrus.add.user=cyrusadmin password create %1%
mail.hook.cyrus.add.user=cyrus_adduser password %1%
```

Delete Examples:

```
mail.hook.cyrus.delete.user=cyrusadmin password delete %1%
mail.hook.cyrus.delete.user=cyrus_userdel password %1%
```

Other properties:

```
mail.hook.cyrus.home=/home/cyrus
```

FuseMailHook

`FuseMailHook` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

See http://www.fusemail.com/support/api.html for more information. You must also update the `mail.account.finder` property.

```
mail.hook.fusemail.url=https://www.fusemail.com/api/request.html
mail.hook.fusemail.username=
mail.hook.fusemail.password=
mail.hook.fusemail.account.type=group_subaccount
mail.hook.fusemail.group.parent=
```

SendmailHook

`SendmailHook` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the commands for adding, updating, and deleting a user where %1% is the userID and %2% is the password. Set the home and virtual user table information.

```
mail.hook.sendmail.add.user=adduser %1% -s /bin/false
mail.hook.sendmail.change.password=autopasswd %1% %2%
mail.hook.sendmail.delete.user=userdel -r %1%
mail.hook.sendmail.home=/home
mail.hook.sendmail.virtusertable=/etc/mail/virtusertable
mail.hook.sendmail.virtusertable.refresh=bash -c "makemap hash
/etc/mail/virtusertable < /etc/mail/virtusertable"
```

ShellHook

`ShellHook` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the location of the shell script that will interface with any mail server.

```
mail.hook.shell.script=/usr/sbin/mailadmin.ksh
```

Set to true to enable SMTP debugging.

```
mail.smtp.debug=false
```

Input a list of comma-delimited email addresses that will receive a BCC of every email sent through the mail server.

```
mail.audit.trail=
```

Message Boards Portlet

`Message Boards Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Configure mail notification settings.

```
message.boards.email.from.name=Joe Bloggs
message.boards.email.from.address=test@liferay.com
message.boards.email.html.format=true
message.boards.email.message.added.enabled=true
message.boards.email.message.added.subject.prefix=com/liferay/portlet/messageboards/
dependencies/email_message_added_subject_prefix.tmpl
message.boards.email.message.added.body=com/liferay/portlet/messageboards/de
pendencies/email_message_added_body.tmpl
message.boards.email.message.added.signature=com/liferay/portlet/messageboards/
dependencies/email_message_added_signature.tmpl
message.boards.email.message.updated.enabled=true
message.boards.email.message.updated.subject.prefix=com/liferay/portlet/messageboards/
dependencies/email_message_updated_subject_prefix.tmpl
message.boards.email.message.updated.body=com/liferay/portlet/messageboards/
dependencies/email_message_updated_body.tmpl
message.boards.email.message.updated.signature=com/liferay/portlet/messageboards/
dependencies/email_message_updated_signature.tmpl
```

Set this to true to allow anonymous posting.

```
message.boards.anonymous.posting.enabled=true
```

Type the time in minutes on how often this job is run. If a user's ban is set to expire at 12:05 PM and the job runs at 2 PM, the expire will occur during the 2 PM run.

```
message.boards.expire.ban.job.interval=120
```

Type the time in days to automatically expire bans on users. Set to 0 to disable auto expire.

Examples:

```
message.boards.expire.ban.interval=10
message.boards.expire.ban.interval=0
```

Type the rss feed abstract length. This value limits what goes in the RSS feed from the beginning of the message board post. The default is the first 200 characters.

```
message.boards.rss.abstract.length=200
```

My Places Portlet

`My Places Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true to show user public sites with no layouts.

```
my.places.show.user.public.sites.with.no.layouts=true
```

Set this to true to show user private sites with no layouts.

```
my.places.show.user.private.sites.with.no.layouts=true
```

Set this to true to show organization public sites with no layouts.

```
my.places.show.organization.public.sites.with.no.layouts=true
```

Set this to true to show organization private sites with no layouts.

```
my.places.show.organization.private.sites.with.no.layouts=true
```

Set this to true to show community public sites with no layouts.

```
my.places.show.community.public.sites.with.no.layouts=true
```

Set this to true to show community private sites with no layouts.

```
my.places.show.community.private.sites.with.no.layouts=true
```

Navigation Portlet

`Navigation Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Specify the options that will be provided to the user in the edit configuration mode of the portlet.

```
navigation.display.style.options=1,2,3,4,5,6
```

Define each mode with four comma-delimited strings that represent the form: header- Type, rootLayoutType, rootLayoutLevel, and includedLayouts.

```
navigation.display.style[1]=breadcrumb,relative,0,auto
navigation.display.style[2]=root-layout,absolute,2,auto
navigation.display.style[3]=root-layout,absolute,1,auto
navigation.display.style[4]=none,absolute,1,auto
navigation.display.style[5]=none,absolute,1,all
navigation.display.style[6]=none,absolute,0,auto
```

Nested Portlets Portlet

`Nested Portlets Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

```
nested.portlets.layout.template.default=2_columns_i
```

Add a comma separated list of layout templateIDs that should not be allowed in the Nested Portlets Portlet.

```
nested.portlets.layout.template.unsupported=freeform,1_column
```

Portlet CSS Portlet

`Portlet CSS Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true to enable the ability to modify portlet CSS at runtime via the Look and Feel icon. Disabling it can speed up performance.

```
portlet.css.enabled=true
```

Shopping Portlet

`Shopping Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the following to true if cart quantities must be a multiple of the item's minimum quantity.

```
shopping.cart.min.qty.multiple=true
```

Set the following to true to forward to the cart page when adding an item from the category page. The item must not have dynamic fields. All items with dynamic fields will forward to the item's details page regardless of the following setting.

```
shopping.category.forward.to.cart=false
```

Set the following to true to show special items when browsing a category.

```
shopping.category.show.special.items=false
```

Set the following to true to show availability when viewing an item.

```
shopping.item.show.availability=true
```

Set the maximum file size and valid file extensions for images. A value of 0 for the maximum file size can be used to indicate unlimited file size. However, the maximum file size allowed is set in the property `com.liferay.portal.upload.UploadServletRequestImpl.max.size`.

```
shopping.image.small.max.size=51200
shopping.image.medium.max.size=153600
shopping.image.large.max.size=307200
```

A file extension of * will permit all file extensions.

```
shopping.image.extensions=.gif,.jpeg,.jpg,.png
```

Configure email notification settings.

```
shopping.email.from.name=Joe Bloggs
shopping.email.from.address=test@liferay.com
shopping.email.order.confirmation.enabled=true
shopping.email.order.confirmation.subject=com/liferay/portlet/shopping/dependencies/
email_order_confirmation_subject.tmpl
shopping.email.order.confirmation.body=com/liferay/portlet/shopping/dependencies/
email_order_confirmation_body.tmpl
shopping.email.order.shipping.enabled=true
shopping.email.order.shipping.subject=com/liferay/portlet/shopping/dependencies/
```

```
email_order_shipping_subject.tmpl
shopping.email.order.shipping.body=com/liferay/portlet/shopping/dependencies/
email_order_shipping_body.tmpl
```

Software Catalog Portlet

`Software Catalog Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the maximum file size and max file dimensions for thumbnnails. A value of 0 for the maximum file size can be used to indicate unlimited file size. However, the maximum file size allowed is set in the property `com.liferay.portal.upload.UploadServletRequestImpl.max.size`.

```
sc.image.max.size=307200
sc.image.thumbnail.max.height=200
sc.image.thumbnail.max.width=160
```

Tags Compiler Portlet

`Tags Compiler Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set this to true to enable the ability to compile tags from the URL. Disabling it can speed up performance.

```
tags.compiler.enabled=true
```

Tags Portlet

`Tags Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Input a class name that implements `com.liferay.portlet.tags.util.TagsAssetValidator`. This class will be called to validate assets. The `DefaultTagsAssetValidator` class is just an empty class that doesn't actually do any validation.

The `MinimalTagsAssetValidator` requires all assets to have at least one tag entry.

Examples:

```
tags.asset.validator=com.liferay.portlet.tags.util.DefaultTagsAssetValidator
#tags.asset.validator=com.liferay.portlet.tags.util.MinimalTagsAssetValidator
```

Tasks Portlet

`Tasks Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Specify the default number of approval stages.

```
tasks.default.stages=2
```

Specify the default role name for each stage of approval ordered from lowest level of approval to highest. These Roles must have the APPROVE_PROPOSAL permission.

```
tasks.default.role.names=Community Administrator,Community Owner
```

Translator Portlet

`Translator Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the default languages to translate a given text.

```
translator.default.languages=en_es
```

Web Form Portlet

`Web Form Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the maximum number of dynamic fields to process.

```
web.form.portlet.max.fields=50
```

Wiki Portlet

`Wiki Portlet` is a property in the `portal.properties` file, which is the default configuration file for Sun GlassFish Web Space Server. You can override this property using `portal-ext.properties file`.

Set the URL of a page that contains more information about the classic syntax of the wiki. It will be shown to the user when editing a page.

```
wiki.classic.syntax.help.url=http://wiki.liferay.com/index.php/Wiki_Portlet
```

Set the name of the default page for a wiki node. The name for the default page must be a valid wiki word. A wiki word follows the format of having an upper case letter followed by a series of lower case letters followed by another upper case letter and another series of lower case letters. See http://www.use mod.com/cgi-bin/wiki.pl?WhatIsaWiki for more information on wiki naming conventions.

```
wiki.front.page.name=FrontPage
```

Set the name of the default node that will be automatically created when the Wiki portlet is first used in a community.

```
wiki.initial.node.name=Main
```

Set the following property to specify the requirements for the names of wiki pages. By default only a few characters are forbidden. Uncomment the following regular expression to allow only *CamelCase* titles.

```
wiki.page.titles.regexp=([^/\\[\\]%&?@]+)
#wiki.page.titles.regexp=(((\\p{Lu}\\p{Ll}+)_?)+)
```

Set the following property to specify the characters that will be automatically removed from the titles when importing wiki pages. This *regexp* should remove any characters that are forbidden in the regexp specified in `wiki.page.titles.regexp`.

```
wiki.page.titles.remove.regexp=([/\\[\\]%&?@]+)
```

Set the list of supported wiki formats and the default wiki format.

```
wiki.formats=creole,html
wiki.formats.default=creole
```

Configure settings for each of the wiki formats.

```
wiki.formats.engine[classic_wiki]=com.liferay.portlet.wiki.engines.friki.
FrikiEngine
wiki.formats.configuration.main[classic_wiki]=wiki.transform
wiki.formats.configuration.interwiki[classic_wiki]=intermap.txt
wiki.formats.edit.page[classic_wiki]=/html/portlet/wiki/edit/wiki.jsp
wiki.formats.help.page[classic_wiki]=/html/portlet/wiki/help/classic_wiki.
jsp
wiki.formats.help.url[classic_wiki]=http://wiki.liferay.com/index.php/Wiki_P
ortlet
```

```
wiki.formats.engine[creole]=com.liferay.portlet.wiki.engines.jspwiki.JSPWikiEngine
wiki.formats.configuration.main[creole]=jspwiki.properties
wiki.formats.edit.page[creole]=/html/portlet/wiki/edit/wiki.jsp
wiki.formats.help.page[creole]=/html/portlet/wiki/help/creole.jsp
wiki.formats.help.url[creole]=http://www.wikicreole.org/wiki/Creole1.0

wiki.formats.engine[html]=com.liferay.portlet.wiki.engines.HtmlEngine
wiki.formats.edit.page[html]=/html/portlet/wiki/edit/html.jsp
wiki.formats.engine[plain_text]=com.liferay.portlet.wiki.engines.TextEngine
wiki.formats.edit.page[plain_text]=/html/portlet/wiki/edit/plain_text.jsp
```

Set the list of supported wiki importers.

```
wiki.importers=MediaWiki
```

Configure settings for each of the wiki importers.

```
wiki.importers.page[MediaWiki]=/html/portlet/wiki/import/mediawiki.jsp
wiki.importers.class[MediaWiki]=com.liferay.portlet.wiki.importers.mediawiki.
MediaWikiImporter
```

Configure email notification settings.

```
wiki.email.from.name=Joe Bloggs
wiki.email.from.address=test@liferay.com
wiki.email.page.added.enabled=true
wiki.email.page.added.subject.prefix=com/liferay/portlet/wiki/dependencies/e
mail_page_added_subject_prefix.tmpl
wiki.email.page.added.body=com/liferay/portlet/wiki/dependencies/email_page_
added_body.tmpl
wiki.email.page.added.signature=com/liferay/portlet/wiki/dependencies/email_
page_added_signature.tmpl
wiki.email.page.updated.enabled=true
wiki.email.page.updated.subject.prefix=com/liferay/portlet/wiki/dependencies/
email_page_updated_subject_prefix.tmpl
wiki.email.page.updated.body=com/liferay/portlet/wiki/dependencies/email_pag
e_updated_body.tmpl
wiki.email.page.updated.signature=com/liferay/portlet/wiki/dependencies/emai
l_page_updated_signature.tmpl
wiki.rss.abstract.length=200
```

◆ ◆ ◆ CHAPTER 10

System Maintenance

Maintaining a running implementation of Web Space Server Portal is not much different from maintaining the application server environment upon which it is running. There are, however, several factors which administrators should be aware of when they are responsible for a running instance of Web Space Server. This chapter covers these issues, outlining for system administrators some specifics about keeping a running Web Space Server instance stable and secure.

Following are the sections explained in this chapter:

- "Web Space Server Monitoring using Google Analytics" on page 265
- "Backing Up a Web Space Server Installation" on page 266
- "Monitoring and Logging" on page 268

The discussion on back up will cover what parts of Web Space Server should be backed up. Specific backup software or procedures are not covered because generally, most organizations have standards for doing backups of their systems, and Web Space Server as a Java EE application fits well into these standards.

Web Space Server Monitoring using Google Analytics

Web Space Server includes built-in support for Google Analytics, allowing administrators to make use of Google's tool set for analyzing site traffic data. When you sign up for Google Analytics, a snippet of code is provided which needs to be added to your web pages in order to allow Google's system to register the page hit. It can be a tedious process to add this code to every page on a site, especially if it is a large site and there is a lot of user-generated content.

This problem can be solved in Liferay by putting Google's code into a custom theme written especially for the site on which the portal is running. Doing this, however, requires that a theme developer make specific changes to the theme, and it prevents users from using the many freely available themes that are available for Web Space Server 'out of the box'.

Because of this, support for Google Analytics has been built into Web Space Server, and can be turned on through a simple user interface. This allows Web Space Server Administrators to make use of Google Analytics on a community by community basis and turn it on and off when needed.

To enable Google Analytics support, go to the Manage Pages screen for the community for which you want to enable support. You can do this through the Communities portlet or by choosing the Manage Pages from the Welcome menuwhile you are on a page in the community. Select Monitoring under Settings.

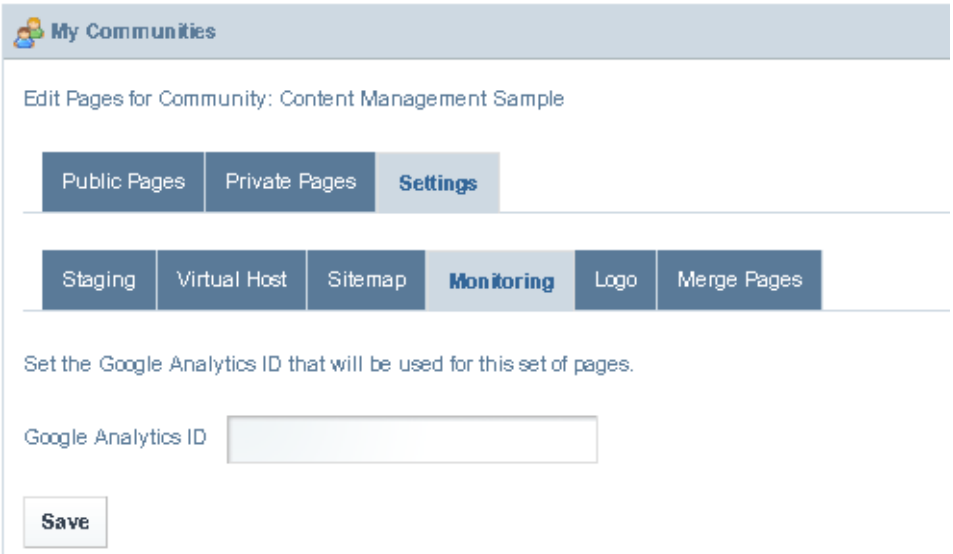

FIGURE 10–1 Monitoring Using Google Analytics

To enable Google Analytics support, go to the Manage Pages screen for the community for which you want to enable support. You can do this through the Communities portlet or by clicking the Manage Pages link in the Dock while you are on a page in the community.

Backing Up a Web Space Server Installation

Once you have an installation of Web Space Server Portal running, you will want to have proper backup procedures in place in case of a catastrophic failure of some kind. Web Space Server is not very different from any other application that may be running in your application server, but there are some specific components that need to be backed up in addition to your regular backup procedures for your application server.

Source Code

If you have extended Web Space Server or have written portlet or theme plugins, they should be stored in a source code repository such as Subversion, CVS, or Git. This repository should be backed up on a regular basis to preserve your ongoing work.

If you are extending Web Space Server with the Extension Environment, you will want to make sure that you also store the version of the Web Space Server source on which your extension environment is based. This allows your developers convenient access to all of the tools they need to build your extension and deploy it to a server.

Web Space Server's File System

Web Space Server's configuration file, `portal-ext.properties`, gets stored in the WEB-INF/classes folder in the location to which your application server deployed Web Space Server. At a minimum, this file should be backed up, but it is generally best to back up your whole application server.

Web Space Server also stores configuration files, search indexes, cache information, and the default Jackrabbit document repository in a folder called `webspace` in the domain directory of the application server. You need to backup this folder.

Database

Web Space Server's database is the central repository for all of the Portal's information and is the most important component which needs to be backed up. You can do this by either backing up the database live (if your database allows this) or by exporting the database and then backing up the exported file. For example, MySQL ships with a *mysqldump* utility which allows you to export the entire database and data into a large SQL file. This file can then be backed up. In case of a database failure, it can be used to recreate the state of the database at the time the dump was created.

You can use the Oracle dump feature for backup and restore of Oracle database. See, `http://www.orafaq.com/wiki/Import_Export_FAQ`.

If you are using Web Space Server's Document Library extensively, it is likely that you have configured Jackrabbit to store documents in a database rather than the file system. In this case, the Jackrabbit database should be backed up also.

Monitoring and Logging

The admin user need to access Control Panel → Server → Server Administration for monitoring and logging in Sun GlassFish Web Space Server.

Monitoring in Sun GlassFish Web Space Server

Sign in to Web Space Server as admin user, and navigate to Control Panel → Server → Server Administration from the Welcome menu.

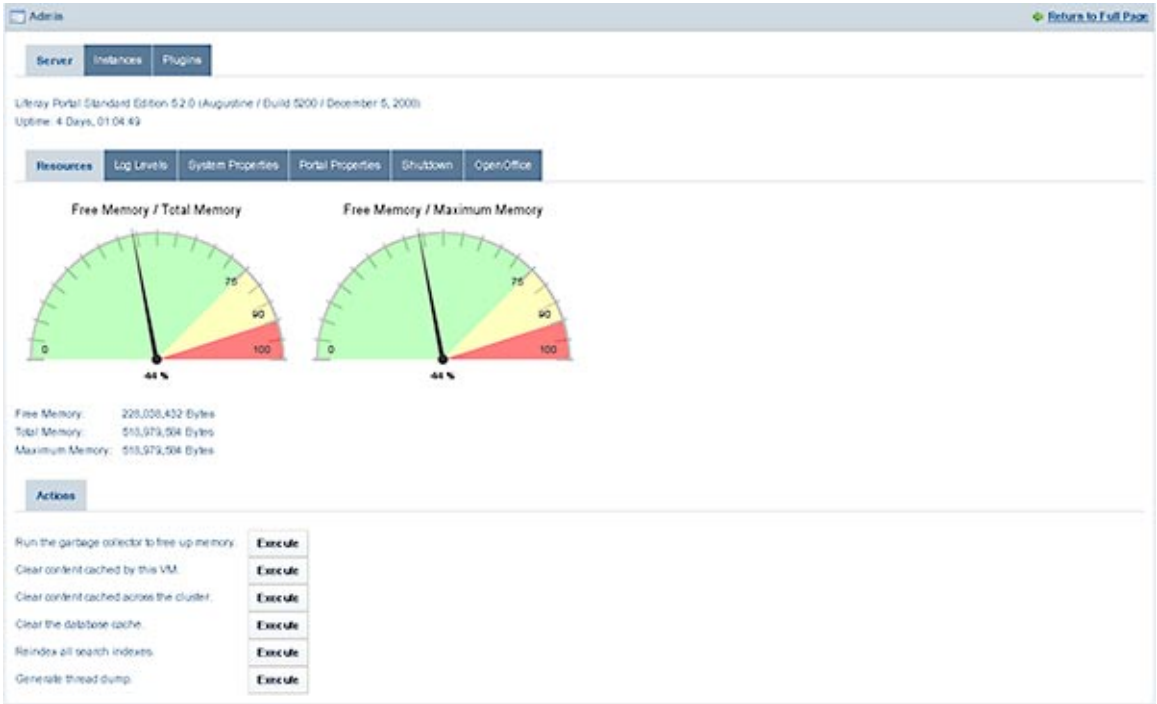

FIGURE 10–2 Monitoring of Resources

You can execute a resource maintenance action by selecting the Execute button next to any option in the following list of actions. You can execute the following actions:

Run the garbage collector to free up memory Garbage collection frees memory occupied by unused objects. Click the Execute buttonnext to the Run the garbage collector to free up memory option. It increases the 'Free Memory' considerably.

Clear content cached by this VM	The Virtual Machine identifies the web page responses that are the same for each request and to remember (cache) the content. In some cases it can be useful to clear this cache to free the memory.
Clear content cached across the cluster	Executing this action clears the cluster cache.
Clear the database cache	Executing this action clears the database cache.
Reindex all search indexes	Executing this action removes all old search entries.
Generate thread dump	When the application server freezes or hangs or becomes sluggish for no apparent reason, it is recommended to generate a thread dump. Executing this action generates a thread dump.

Logging in Sun GlassFish Web Space Server

Web Space Server uses `Log4j` extensively to implement logging for nearly every class in the portal. If you need to debug something specific while a system is running, you can use the Admin portlet to set logging levels by class dynamically.

Sign in to Web Space Server as admin user, and navigate to Control Panel → Server → Server Administration from the Welcome menu. Sign in as admin user to access the Admin portlet. To view the log levels, select the Log Levels tab.

You will then see a paginated list of logging categories. You can select a logging level for a category from the list. If the logging level is set to ERROR, an error message is displayed if an error occurs in the class. Similarly, if the logging level is set to WARN, an error message is displayed if a warning occurs in the class. OFF, FATAL, ERROR, WARN, INFO, DEBUG, and ALL are the different logging levels.

Each category is filtered by its place in the class hierarchy. For example, if you wanted to see logging for a specific class that is registered in the Admin portlet, you would browse to that specific class and change its log level to something that is more descriptive, such as DEBUG. Once you click the Save button at the bottom of the list, you will start seeing DEBUG messages from that class in your application server's log file.

If you are not sure which class you want to see log messages for, you can find a place higher up in the hierarchy and select the package name instead of an individual class name. If you do this, messages for every class lower in the hierarchy will be displayed in your application server's log file.

Be careful when you do this. If you set the log level to DEBUG somewhere near the top of the hierarchy (such as `com.liferay`, for example), you may wind up with a lot of messages in your log file. This could make it difficult to find the one you were looking for, and causes the server to do more work writing messages to its log file.

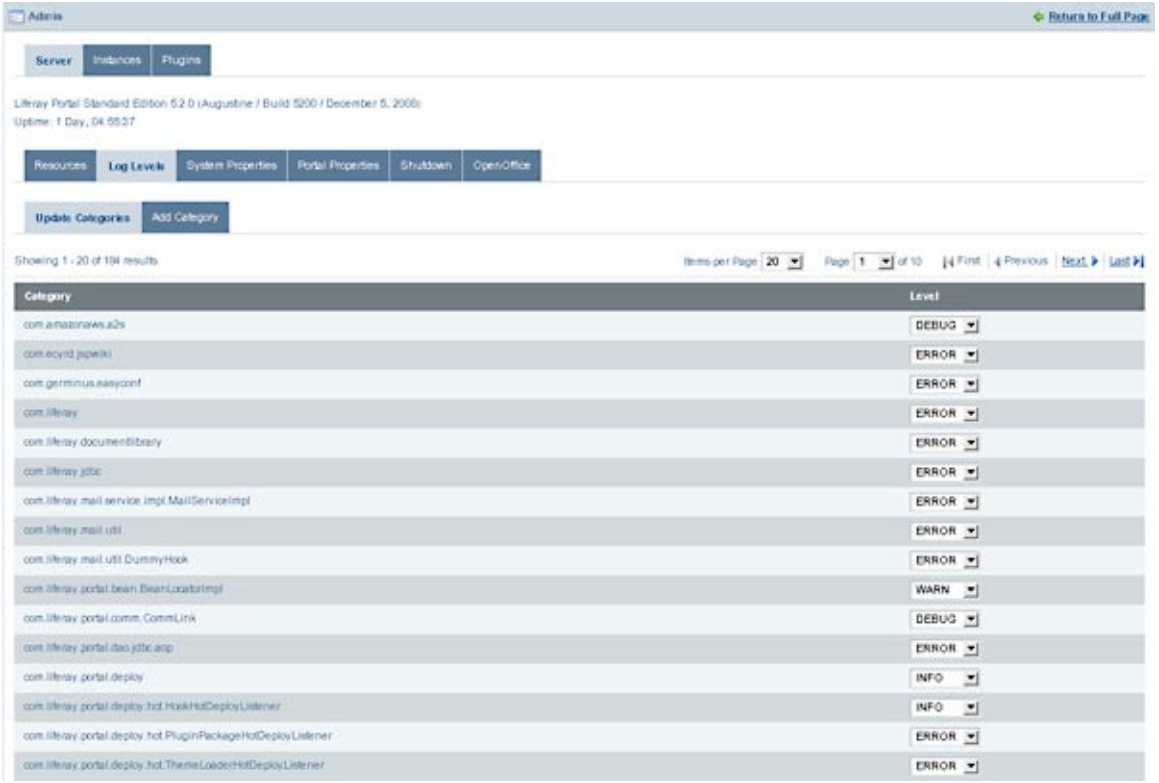

FIGURE 10–3 Changing the Logging Level

If you are working in the extension environment or have created a plugin and want to set the log level for one of your own classes, you can register that class (so long as it uses Log4J to do its logging) with the Admin portlet so that you can control the log levels more easily.

You will first need to implement Log4J logging in your class, with a statement such as the following (taken from Liferay's JCRHook class):

```
private static Log _log = LogFactory.getLog(JCRHook.class);
```

You would then use this `_log` variable to create log messages in your code for the various logging levels:

```
_log.error("Reindexing " + node.getName(), e1);
```

To enable your logging messages to appear in your server's log file via the Admin portlet, click the Add Category tab on the same Log Levels page.

FIGURE 10–4 Adding a Logging Category

You will see that you can add a logging category to the Admin portlet. Simply put in the fully qualified name of your class or of the package that contains the classes whose log messages you want to view, choose a log level, and then click the Save button. You will now start to see log messages from your own class or classes in the server's log file.

◆ ◆ ◆ CHAPTER 11

Performance Tuning

You can address any of currently faced or anticipated performance issues by doing performance tuning for the following:

- "Database" on page 273
- "Application Server" on page 275
- "Thread Pools" on page 275
- "MySQL Database Connections" on page 275
- "Clustering" on page 275
- "Memory" on page 275
- "Properties File Changes" on page 276
- "Servlet Filters" on page 277
- "Portlets" on page 277
- "Java Environment" on page 278
- "Portal Extensions" on page 278

Database

If you are using the MySQL database, you need to configure the `my.cnf` file. The following are some of the important variables in the `my.cnf` file.

- `query_cache_size`

  In a situation where the database has to repeatedly run the same queries on the same data set, returning the same results each time, MySQL can cache the result set, avoiding the overhead of running through the data over and over and is extremely helpful on busy servers.

- `key_buffer_size`

The value of `key_buffer_size` is the size of the buffer used with indexes. The larger the buffer, the faster the SQL command finishes and a result is returned. The rule-of-thumb is to set the `key_buffer_size` to at least a quarter, but no more than half, of the total amount of memory on the server. Ideally, it will be large enough to contain all the indexes (the total size of all `.MYI` files on the server).

A simple way to check the actual performance of the buffer is to examine four additional variables: `key_read_requests`, `key_reads`, `key_write_requests`, and `key_writes`.

- If you divide the value of `key_read` by the value of `key_reads_requests`, the result should be less than 0.01. Also, if you divide the value of `key_write` by the value of `key_writes_requests`, the result should be less than 1.

- `table_cache`

  The default is 64. Each time MySQL accesses a table, it places it in the cache. If the system accesses many tables, it is faster to have these in the cache. MySQL, being multi-threaded, may be running many queries on a table at a time, and each of these opens a table. Examine the value of `open_tables` at peak times. If you find that it stays at the same value as your `table_cache` value, and then the number of `opened_tables` starts increasing rapidly, you should increase the `table_cache` if you have enough memory.

- `sort_buffer`

  The `sort_buffer` is very useful for speeding up `myisamchk` operations (which is why it is set much higher for that purpose in the default configuration files), but it can also be useful everyday when performing large numbers of sorts.

- `read_rnd_buffer_size`

  The `read_rnd_buffer_size` is used after a sort, when reading rows in sorted order. If you use many queries with ORDER BY, upping this can improve performance. Remember that, unlike `key_buffer_size` and `table_cache`, this buffer is allocated for each thread. This variable was renamed from `record_rnd_buffer` in MySQL 4.0.3. It defaults to the same size as the `read_buffer_size`. A rule-of-thumb is to allocate 1KB, for each 1MB of memory on the server, for example 1MB on a machine with 1GB memory.

- `thread_cache`

  If you have a busy server getting a lot of quick connections, set your thread cache high enough that the `Threads_created` value in SHOW STATUS stops increasing. This should take some of the load off of the CPU.

- `tmp_table_size`

  "`Created_tmp_disk_tables`" are the number of implicit temporary tables on disk created while executing statements and "`created_tmp_tables`" are memory-based. Obviously it is bad if you have to go to disk instead of memory all the time.

Application Server

Tuning the Application Server is most important to see 'real' performance improvement.

For tuning GlassFish see, *Sun GlassFish Enterprise Server 2.1 Performance Tuning Guide*.

Thread Pools

For the details of thread pooling in GlassFish, see the chapter on Thread Pooling in Sun GlassFish Enterprise Server 2.1 Administration Guide.

MySQL Database Connections

For tuning MySQL database connections, you can refer MySQL Documentation.

Clustering

Clustering is needed for scalability, increased availability, and load balancing.

If you are using Sun GlassFish Enterprise Server as the application server, you can refer to the following links for the information on clustering:

- `http://developers.sun.com/appserver/reference/techart/glassfishcluster/`
- `https://glassfish.dev.java.net/javaee5/build/GlassFish_LB_Cluster.html`
- `http://wiki.glassfish.java.net/Wiki.jsp?page=GlassFishV2Architecture`
- `http://docs.sun.com/app/docs/prod/gf.entsvr.v3pre?l=en[amp ]a=view`

Memory

Memory is one of the first things to look at when you want to optimize performance. If you have any disk swapping, that will have a serious impact on performance. Make sure that your server has an optimal amount of memory and that your JVM is tuned to use it.

There are three JVM command switches that control the amount of memory it uses.

Java heap size:

`-Xms`

VM heap size:

`-Xmx`

PermGen space:

`-XX:MaxPermSize`

These three settings control the amount of memory available to the JVM initially, the maximum amount of memory into which the JVM can grow, and the separate area of the heap called Permanent Generation space.

For example, the default settings can be:

```
-Xms128m -Xmx1024m -XX:MaxPermSize=128m
```

This is perfectly reasonable for a moderately sized machine or a developer machine. These settings allow the JVM to initially take 128MB of RAM, grow up to 1024MB of RAM, and have a PermGen space of 128MB. If, however, you have Web Space Server on a server with 4GB of RAM and you are having performance problems, the first thing you might want to look at is increasing the memory available to the JVM. You will be able to tell if memory is a problem by running a profiler (such as **Jprobe** or **YourKit**) on the server. If you see Garbage Collection (GC) running frequently, you will definitely want to increase the amount of memory available to the JVM.

Issues with PermGen space can also affect performance. PermGen space contains long-lived classes, anonymous classes and interned Strings. Hibernate, in particular-which Web Space Server uses extensively has been known to make use of PermGen space. If you increase the amount of memory available to the JVM, you may want to increase the amount of PermGen space accordingly.

Properties File Changes

There are also some changes you can make to your `portal-ext.properties` file once you are in a production environment.

Set the following to false to disable checking the last modified date on server side CSS and JavaScript:

```
last.modified.check=false
```

Set this property to true to load the theme's merged CSS files for faster loading for production. By default, it is set to false for easier debugging for development. You can also disable fast loading by setting the URL parameter `css_fast_load` to 0.

```
theme.css.fast.load=true
```

Set this property to true to load the combined JavaScript files from the property javascript.files into one compacted file for faster loading for production. By default, it is set to false for easier debugging for development. You can also disable fast loading by setting the URL parameter `js_fast_load` to 0.

```
javascript.fast.load=true
```

Also, set the following parameters:

```
portlet.css.enabled=false

velocity.engine.resource.manager.cache.enabled=true

com.liferay.portal.servlet.filters.layoutcache.LayoutCacheFilter=true
```

Servlet Filters

Web Space Server comes by default with a number of servlet filters enabled and running. It is likely that for your installation, you don't need them all. Two filters that you can disable without any impact are the `Compression Filter` and the `Strip Filter`. These filters are responsible for shrinking the size of the response (to save bandwidth). The Strip Filter removes whitespace from the response object, and the Compression Filter compresses it. This obviously requires some processing, and so disabling these two filters can enhance performance.

To disable a servlet filter, simply comment it out of your `web.xml` file.

If there is a feature supported by a servlet filter that you know you are not using, you can comment it out as well to achieve some performance gains. For example, if you are not using CAS for single sign-on, comment out the `CAS Filter`. If you are not using NTLM for single sign-ons, comment out the `Ntlm Filter`. If you are not using the Virtual Hosting for Communities feature, comment out the `Virtual Host Filter`. The fewer servlet filters you are running, the less processing power is needed for each request.

Portlets

Web Space Server comes pre-bundled with many portlets which contain a lot of functionality, but not every web site that is running on Web Space Server needs to use them all. In `portlet.xml` and `liferay-portlet.xml`, comment out the ones you are not using. While having a loan calculator, analog clock, or game of hangman available for your users to add to pages is nice, those portlets may be taking up resources that are needed by custom portlets you have written for your site. If you are having performance problems, commenting out some of the unused portlets may give you the performance boost you need.

Java Environment

The following are the links for articles and white papers on tuning Java Runtime Environment.

- http://java.sun.com/performance/reference/whitepapers/tuning.html
- http://www.javaperformancetuning.com/

Portal Extensions

Some changes to the `portal-ext.properties` file can boost the performance of Sun GlassFish Web Space Server.

◆ ◆ ◆ CHAPTER 12

Troubleshooting

This chapter contains troubleshooting information for some of the following issues that you may face when you are working with Web Space Server.

- "Troubleshooting for Installation Issues " on page 279
- "Troubleshooting for Issues Related With Accessing the HTTP Instance" on page 280
- "Troubleshooting for Issues Related With User Activities" on page 280
- "Troubleshooting for Issues Related With Installing Plugins" on page 281
- "Troubleshooting for the Issues in Choosing the Logo Size" on page 282
- "Common Questions" on page 282

Troubleshooting for Installation Issues

If you are deploying Web Space Server on an existing installation of GlassFish, you need to determine the install location of GlassFish. If GlassFish is installed at the root directory, you can deploy Web Space Server either at the root directory or at the user directory. If GlassFish is installed at your user directory, you must install Web Space Server at the same user directory.

If the JDK, GlassFish, and Web Space Serversoftware are all installed,Web Space Server is at the top layer, GlassFish is in the middle layer, and JDK is in the bottom layer. When you are using the GlassFish Web Space Server bundle, you need to determine the install location of JDK. If JDK is at the root directory, you can install the bundle either at the root directory or at your user directory. If JDK is installed at the user directory, you need to install the bundle at the same directory.

Note – It is a good practice to have your GlassFish installation dedicated only for running Web Space Server.

Suppose you have JDK 1.5 installed in the root directory and you have installed JDK 1.6 in your user directory. Because Web Space Server often works better on a more recent JDK version, you might want to override the installation at the root directory.

▼ To Reset the JAVA_HOME Variable to the User Directory

1 **Type the following commands in a terminal window:**

```
export JAVA_HOME JDK-install-dir
export PATH=$JAVA_HOME/bin:$PATH
```

2 **To verify the change, type the following command:**

```
echo $JAVA_HOME
```

The new directory should be listed.

▼ To Set the JAVA_HOME Environment Variable to the User Directory on Non Solaris Operating Systems

1 **Open the** *GlassFish-install-dir*`/config/asenv.conf/asenv.bat` **file.**

2 **Set the** `AS_JAVA` **variable to the JDK 1.6 user installation.**

3 **Reinstall the Web Space Server bundle and start the domain.**

Troubleshooting for Issues Related With Accessing the HTTP Instance

You can access the HTTP instance for the Web Space Server installation on your machine at `http://localhost:8080/`. In case you are installing Web Space Server on a remote machine, you access the HTTP instance at `http://`<*machine-name*>`:8080/`.

Troubleshooting for Issues Related With User Activities

Users may face some issues when they are working with Web Space Server. Workaround for those issues are discussed in this section.

▼ To Create a Private Page

If your user account has only public pages and you want to add a private page to it, perform the following procedure.

1 **Choose Control Panel from the Welcome menu.**

2. **Click My Pages under My Account.**
3. **Click the Private Pages tab.**
4. **Type a name for the page and click the Add Page button.**

Troubleshooting for Issues Related With Installing Plugins

The property called `auto.deploy.dest.dir` is essential for installing plugins. If you are failing to install plugins, the reason can be that the property is not defined properly. GlassFish defines the hot deploy folder as a folder called *autodeploy* inside of the domain folder in which your server is running. By default, this is in <*Glassfish Home*>`/domains/domain1/autodeploy`. JBoss defines the hot deploy folder as a root folder inside of the particular server configuration you are using. By default, this is in <*JBoss Home*>`/server/default/deploy`. WebLogic defines this folder inside of the domain directory. By default, this is in <*Bea Home*>`/user_projects/domains/<domain name>/ autodeploy`.

You need to first determine where the hot deploy folder is for the container you are running. Consult your product documentation for this. Once you have this value, there are two places in which you can set it: the `portal-ext.properties` file and in the Plugin Installer portlet.

To change this setting in the `portal-ext.properties` file, browse to <*ROOT*>`/webspace-for-gfv2/var/webspace/war-workspace/customs/webspace/WEB-INF/classe` folder. Here you will find the `portal-ext.properties` file. Open this file in a text editor and look for the property `auto.deploy.dest.dir`. If it does not appear in the file, you can add it. After this, navigate to <*ROOT*>`/webspace-for-gfv2/var/webspace/war-workspace`, and run `ant -f synchronize.xml`. The safest way to set this property is to define the property using an absolute path from the root of your file system to your application server's hot deploy folder. For example, if you are using GlassFish, and you have the server installed in `/java/glassfish`, your `auto.deploy.dest.dir` property would look like the following:

```
auto.deploy.dest.dir=/java/glassfish/domains/domain1/autodeploy
```

Remember, if you are on a Windows system, use forward slashes instead of back slashes, like so:

```
auto.deploy.dest.dir=C:/java/glassfish/domains/domain1/autodeploy
```

Save the file and then restart your container. Now plugins should install correctly.

Troubleshooting for the Issues in Choosing the Logo Size

You can change the logo for the Community from Control Panel → Portal → Settings. You need to be cautious about the size of the logo image. A logo of big size, for example, a logo with the size 600*600 pixels can adversely affect the functioning of the portal.

Try to use a logo with minimal size.

Common Questions

The following are some commonly asked questions about Web Space Server software.

Question: What databases does Web Space Server support?

Answer: HSQL, MySQL, Microsoft SQL, and Oracle 10g.

Question: What is the recommended JDK version to use with Web Space Server?

Answer: JDK 1.6.0_07 or later. Also make sure that Ant 1.7.0 is installed on the machine on which you are installing Web Space Server.

Question: What size image should I use for my site logo?

Answer: Your site logo should not be larger than 50 x 50 pixels.

Question: What is the recommended amount of memory (RAM) to use with Web Space Server?

Answer: The machine on which a Web Space Server server is running should have a minimum of 2GB RAM. Client machines connecting to a Web Space Server site should have a minimum of 1GB RAM.

Question: Which are the most recommended web browsers for Web Space Server?

Answer: Sun GlassFish Web Space Server is best suited for running on Firefox 2.*x* and Firefox 3.*x* (on all platforms), any of the recent versions of Internet Explorer (on Windows) and Safari (on MacOS), and all other popular web browsers.

Question: On what port does Web Space Server run?

Answer: By default, Web Space Server runs on port `8080`. The port can be changed later, but the Web Space Server installation program runs on port `8080`, so this port must be free before you start the installation process. If you are upgrading from a previous Web Space Server installation, be sure to stop any running GlassFish domains before proceeding.

Question: How to create a custom portlet bundle?

Answer: You can use Add Application to add portlets and widgets to a page. You can add portlets and widgets to the public pages and private pages of Communities and Organizations and

propagate those Communities and organizations to production environment. the portlets and widgets thus bundled with a Community or an Organization can be considered as custom portlet bundles.

Question: How the Delegated Administration feature works in Sun GlassFish Web Space Server?

Answer: Admin users can delegate portlets to other users by adding portlets to their public page. The admin users can add portlets by selecting Add Application from the Welcome menu. All users can access a portlet which is on the public page of the admin user.

Question: How you can chat and make calls using the Web Space Server?

Answer: You can chat and make calls using Sun GlassFish Web Space Server. Chat feature is readily integrated with the product. You can make calls using Web Space Server by installing the CALL-WEB add-on. See, *Sun GlassFish Web Space Server 10.0 CALL-WEB Add-On Guide*.

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